

**TOWN OF NARRAGANSETT
ENGINEERING DEPARTMENT**

REQUEST FOR PROPOSALS

**SEWER SYSTEM EVALUATION SURVEY –
CONGDON PUMP STATION SEWER AREA**

Narragansett, Rhode Island



Jeffry Ceasrine, P.E.
Town Engineer

Proposal Due Date: February 15, 2012 @ 11:00 a.m.

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INVITATION TO BID

Separate sealed Bids will be received by the TOWN OF NARRAGANSETT, RHODE ISLAND for the **SEWER SYSTEM EVALUATION SURVEY – CONGDON PUMP STATION SEWER AREA** on or before **11:00 a.m., on February 15, 2012** at the office of the Purchasing Agent, 25 Fifth Avenue, Narragansett, Rhode Island and at that time will be opened and read in public.

Specifications for the **SEWER SYSTEM EVALUATION SURVEY – CONGDON PUMP STATION SEWER AREA** may be obtained at the Purchasing Office, 25 Fifth Avenue, Narragansett, Rhode Island between the hours of 8:30 a.m. and 4:30 p.m., Monday through Friday, and are available on the Town website, www.narragansettri.gov.

All bids must be submitted on the bid form provided, in duplicate and clearly marked:

(Sealed Bid)

SEWER SYSTEM EVALUATION SURVEY – CONGDON PUMP STATION SEWER AREA

Bids must be enclosed in an opaque envelope addressed to "Purchasing Agent, Town Hall, 25 Fifth Avenue, Narragansett, Rhode Island 02882" bearing the name and address of the Bidder.

No Bidder may withdraw his Bid within ninety (90) days after the scheduled closing time for receipt of Bid.

The Town of Narragansett reserves the right to reject any/all Bids, waive any informalities in the Bids received, and to accept the Bid deemed most favorable to the interest of the Town of Narragansett.

Individuals requesting interpreter services for the hearing impaired must notify the Finance Department (401)782-0644 three (3) business days prior to the Bid opening.

Susan W. Gallagher
Purchasing Agent

STANDARD INSTRUCTIONS TO BIDDERS

DEPARTMENT OF FINANCE-PURCHASING DIVISION

TOWN OF NARRAGANSETT, RHODE ISLAND

THESE INSTRUCTIONS ARE STANDARD FOR ALL PROPOSALS ISSUED BY THE PURCHASING DIVISION AND MAY BE DELETED, OR MODIFIED BY INDICATING SUCH CHANGE BY "SPECIAL INSTRUCTIONS TO BIDDERS."

1. Receipt and Opening of Proposal

Sealed proposals (bids) will be accepted in the office of the Purchasing Agent, Town of Narragansett, R.I. until the time indicated on the advertisement for Bids, for the commodities, equipment or services designated in the specifications and will then be publicly opened and read.

2. Form of Bid

Proposal must be submitted on and in accordance with the forms attached hereto, blank places must be filled in as noted, no change shall be made in the phraseology of the proposal or in the item or items mentioned therein, must contain the name and proper address of the bidding firm, and must be signed by a responsible member of the firm with his/her signature and official title. Proposals that are not complete, or contain any omissions, erasures, alterations, additions or contain irregularities of any kind, may be rejected.

3. Submission of Bids

- a. Envelopes containing bids must be sealed and addressed to the office of the Purchasing Agent, Town Hall, Narragansett, R.I. 02882 and must be marked with the name and address of bidder, date and hour of opening, and name of bid.
- b. The Purchasing Agent will decide when the specified time has arrived to open bids, and no bid received thereafter will be considered.
- c. Any bidder may withdraw his/her bid by written request at any time prior to the advertised time for opening. Telephonic bids, amendments, or withdrawals will not be accepted.
- d. Unless otherwise specified, no bid may be withdrawn for a period of ninety (90) days from the date of bid opening.
- e. Negligence on the part of the bidder in preparing the bid confers no rights for the withdrawal of the bid after it has been opened.

- f. Proposals received prior to the time of opening will be securely kept unopened. No responsibility will attach to an officer or person for the premature opening of a proposal not properly addressed and identified.

4. Prices

Bidders shall state the proposed price in the manner as designated in the Bid Proposal Form. In the event that there is a discrepancy between the unit prices and the extended totals, the unit prices shall govern. In the event there is a discrepancy between the price written in words and written in figures, the prices written in words shall govern.

5. Terms

Cash discounts offered will be considered in determining awards. The discount period shall be computed from the date of delivery or from the correct invoice as received by Town Treasurer, whichever date is later. The date of delivery shall be construed to mean the date on which bid item is determined to meet the specifications and is therefore acceptable. Discounts for a period less than thirty (30) days may not be considered.

6. Rhode Island Sales Tax

The Town is exempt from the payment of R.I. Sales Tax under the 1956 General Laws of the State of Rhode Island, 44-18-30 Paragraph 1, as amended.

7. Federal Excise Taxes

The Town is exempt from the payment of any excise or federal transportation taxes. The price bid must be exclusive of taxes and will be so construed.

8. "Or Equal" Bidding

When the name of a manufacturer, a brand name, or manufacturer's catalogue number is issued as the bid standard in describing an item followed by "Or Equal" this description is used to indicate quality, performance and other essential characteristics of the article required.

If bidding on other than the make, model, brand or sample specified, but equal thereto, bidder must so state by giving the manufacturer's name, catalogue number and any other information necessary to prove that the intended substitution of a commodity is equal in all essential respects to the bid standard. Bidder must prove to the satisfaction of the Town Manager or by person or persons designated by him, that his/her designated substitute is equal to the bid standard: otherwise, his/her bid will be declared "No Bid" insofar as the item in question is concerned.

9. Award and Contract

Unless otherwise specified, the Town reserves the right to make award by item or items, or by total, as may be in the best interest of the Town. A written award (or acceptance of Bid) mailed (or otherwise furnished) to the successful bidder followed by a Town Purchase Order shall, unless otherwise specified, be deemed to result in a binding contract without further action by either party.

10. Delivery

All prices must be on the basis of F.O.B. Delivery Point Narragansett, Rhode Island. Deliveries must consist only of new merchandise or equipment and shall be made between 8:30 a.m. and 3:00 p.m., Monday thru Friday. No delivery shall become due or be acceptable without a written Purchase Order issued by the Town Purchasing Agent.

11. Affirmative Action

EQUAL EMPLOYMENT OPPORTUNITY POLICY STATEMENT

Vendors and Suppliers

For the purposes of this Policy, the term "vendor" shall mean any and all individuals, companies, corporations, and business entities that provide goods or services to the Town of Narragansett pursuant to any and all relevant and appropriate Federal, State, and local purchasing rules, regulations, and procedures.

The Town of Narragansett is committed to the general policy and principle of Equal Employment Opportunity in terms of retaining vendors to provide the Town with goods and services necessary for routine and emergency operations. The Town will not discriminate against vendors as entities, or individual employees thereof on any legally-recognized basis included, but not limited to, race, age, color, religion, sex, marital status, national origin, physical or mental disability, Veteran's status, pregnancy, sexual orientation, genetic conditions, predisposition to certain diseases, or ancestry, except where a bona fide occupational qualification exists.

12. Towns Right to Reject

The Town reserves the right to reject any and all proposals, to waive any informality in the proposals received and to accept the proposal deemed to be most favorable to the best interests of the Town.

13. BOND/SURETY

Contractor awarded a contract with a contract price in excess of fifty thousand dollars (\$50,000) for construction, buildings or public works is to file with the proper authority good and sufficient bond with surety furnished by any surety company authorized to do business in the State of Rhode island and in accordance with Chapter 37-12 of the General Laws of Rhode Island entitled "Contractors' Bonds".

14. INSURANCE

The CONTRACTOR shall provide the following insurances in accordance with the General Conditions:

A. Workmen's Compensation Insurance

The CONTRACTOR shall provide adequate statutory Workmen's Compensation Insurance for all labor employed on the Project who may come within the protection of such laws and shall provide Employer's General Liability Insurance in the amount of \$100,000 for the benefit of his/her employees not protected by such compensation laws.

B. Contractor's Comprehensive Public Liability and Property Damage Liability Insurance

The CONTRACTOR shall carry Comprehensive General Liability Insurance with broad form of Contractual General Liability Endorsement attached, providing for a limit of not less than One Million Dollars (\$1,000,000) for all damages arising out of bodily injuries to or death of one (1) person, and subject to that a limit for each person, a total limit of not less than One Million Dollars (\$1,000,000) for all damages arising out of bodily injuries to or the death of two (2) or more persons in any one accident; and Contractor's Comprehensive Property Damage Liability Insurance providing for a limit of not less than One Million Dollars (\$1,000,000) for all damages arising out of injury to or destruction of property in any one accident; and subject to a limit of not less than One Million Dollars (\$1,000,000) for all damages arising out of injury to or destruction of property during the policy period.

C. Owner's Protective Liability and Property Damage Insurance

The CONTRACTOR shall provide the OWNER an insurance policy written in the name of the OWNER, its employees, servants and agents, and extended to include the interests of the Engineer, its employees, and agents; to protect the OWNER and the Engineer from any liability which might be incurred against them as a result of any operations of the CONTRACTOR or his/her subcontractors, or their employees. Such insurance shall provide for a limit of not less than One Million Dollars (\$1,000,000) for all damages arising out of bodily injuries to or the death of any one (1) person, and subject to that limit for each person, a total limit of not less than One Million Dollars (\$1,000,000) for all damages arising out of bodily injuries to or the death of two (2) or more persons in any one accident; and a limit of not less than One Million Dollars (\$1,000,000) for all damages arising out of injury to or destruction of property in any one accident, and subject to a limit of not less than One Million Dollars (\$1,000,000) for all damages arising out of injury to or destruction of property during the policy period.

D. Comprehensive Automobile Liability and Property Damage Insurance

The CONTRACTOR shall carry Comprehensive Automobile Liability Insurance covering all owned vehicles, hired vehicles, or non-owned vehicles in the amount of not less than One Million Dollars (\$1,000,000) for all damages arising out of bodily injuries

to or the death of any one (1) person; and subject to that limit for each person a total of not less than One Million Dollars (\$1,000,000) for all damages arising out of bodily injuries to or the death of two (2) or more persons in any one accident; and Property Damage coverage in the amount of not less than One Million Dollars (\$1,000,000) for all damages arising out of injury to or destruction of property.

E. Insurance Covering Special Hazards

Special hazards shall be covered by rider or riders to the Public Liability Insurance And Property Damage Insurance policy or policies hereinabove required to be furnished by the CONTRACTOR, or by separate policies of insurance as follows:

1. Property Damage Liability arising out of the collapse of, or structural injury to any building or structure due to excavation (including borrowing, filling, or backfilling in connection therewith), tunneling, pile driving, cofferdam work, or caisson work; or to moving, shoring, underpinning, razing, or demolition of any building or structure, or removal or rebuilding of any structural support thereof.
2. Property Damage Liability for injury to or destruction of property arising directly or indirectly from blasting or explosions, however caused, other than pressure, prime movers, machinery or power-transmitting equipment.
3. Property Damage Liability for injury or destruction of wires, conduits, pipes, mains, sewers, or other similar property or any apparatus in connection therewith, below the surface of the ground, arising from and during the use of mechanical equipment for the purpose of excavating or drilling within the Project limits; injury to or destruction of property at any time resulting therefrom.
4. The CONTRACTOR shall require similar insurance in such amounts to be taken out and maintained by each subcontractor.

F. Fire Insurance

During the progress of Work, the CONTRACTOR shall effect and maintain BUILDERS' RISK INSURANCE ON COMPLETED VALUE FORM against loss by fire, lightning, windstorm, hurricane, cyclone, tornado, hail, explosion, riot, riot attending strike, aircraft, smoke and vehicle damage, vandalism, and malicious mischief upon all Work in place and all material stored at the building site, whether or not covered by partial payments made by the OWNER. This insurance shall be in an amount equal to 100 percent (100%) of the insurable portion of the Project and shall be for the benefit of the OWNER, the CONTRACTOR, and each subcontractor, as their interest may respectively appear.

If there are any existing adjacent or adjoining structures presently used by the OWNER, the risk of the existing adjacent or adjoining structures will be by the OWNER.

15. LABOR REGULATIONS

The following paragraphs regarding nondiscrimination in employment shall be included and become part of these Specifications:

- A. The Contract for Work under this proposal will obligate the contractor and subcontractors not to discriminate in employment practices and conform with Executive Order No. 11246.
- B. Bidders must, if required, submit a compliance report concerning their employment practices and policies in order to maintain their eligibility to receive award of the Contract.
- C. Successful bidders must, if required, submit a list of all subcontractors who will perform Work on the Project, and written signed statements from authorized agents of labor pools with which they will or may deal with for employees on the Work, together with any information to the effect that such labor pools practices or policies are in conformity with Executive Order No. 11246; that they will affirmatively cooperate in or offer no hindrance to the recruitment, employment, and equal treatment of employment, and equal treatment of employees seeking employment and performing Work under this Contract; or a certification as to when such agents or labor pools have failed or refused to furnish them, prior to award of the Contract.

16. WAGE RATES

Attention of the bidders is particularly called to the requirements as to conditions of employment to be observed and minimum wage rates to be paid under the Contract. In conformity with the provisions of Chapter 13 of Title 37, General Laws, Rhode Island, 1956, as amended, the minimum wages for a day's work paid to craftsmen, teamsters and laborers shall be not less than the customary and prevailing rate of wages for a day's work in the locality where the work is undertaken. Such a schedule of wages has been established on a minimum hourly basis and is in file in the office of the State Department of Labor.

BID FORM

Pursuant to and in compliance with the INVITATION TO BID, and the INSTRUCTIONS TO BIDDERS relating thereto, the undersigned bidder hereby states that they have carefully examined the **CONTRACT DOCUMENTS** and the party understands the provisions, requirement, terms and conditions thereof, all of which are acknowledged to be part of the **Bid Proposal**.

Further, they have become familiar with local conditions and the extent of work: has determined the required quality, quantity and sources of supply of all plant, equipment, materials, tools, supplies, labor and all other facilities and things necessary or proper or incidental to the continuous execution and completion of the work as required: and hereby agrees to perform the contract in strict accordance with the **CONTRACT DOCUMENTS**.

The undersigned bidder hereby agrees that the bid proposal submitted shall remain in effect and binding upon the bidder for a period of 90 calendar days, from the date and time bids are received.

The undersigned bidder declares that his/her bid proposal in all respects is fair and made without collusion with any other person, firm, corporation making a proposal for this work.

Item #	Description	Est. Quantity	Unit Price	Total
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1	Sewer System Evaluation Survey (SSES)			
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1 Lump Sum (LS)	\$ _____ /LS	\$ _____
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Price in Words: _____

2	Extensive Manhole Inspections			
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51 Each (EA)	\$ _____ /EA	\$ _____
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Price in Words: _____

3	Smoke Testing Sewer Mains			
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10,500 Linear Feet (LF)	\$ _____ /LF	\$ _____
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Price in Words: _____

Town of Narragansett
Sewer System Evaluation Survey – Congdon Pump Station Sewer Area

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4 Dyed Water Testing

50 Each (EA) \$ _____ /EA \$ _____

Price in Words: _____

5 Dyed Water Flooding

1,000 Linear Feet (LF) \$ _____ /LF \$ _____

Price in Words: _____

6 Internal Home Inspections

160 Each (EA) \$ _____ /EA \$ _____

Price in Words: _____

7 Closed Circuit Television Inspection: Sewer Mains

10,500 Linear Feet (LF) \$ _____ /LF \$ _____

Price in Words: _____

8 Closed Circuit Television Inspection: Sewer Laterals

10,000 Linear Feet (LF) \$ _____ /LF \$ _____

Price in Words: _____

Whenever the estimated quantities of Work to be done and materials to be furnished under this Contract are shown in any of the documents including the Bid Proposal, they are given for use in comparing bids and the right is especially reserved by the OWNER to increase or diminish them as may be deemed necessary or desirable by the OWNER. Such increases or decreases shall in no way affect this Contract, nor shall any such increases or decreases give cause for claims or liabilities for damages.

TOTAL BID PRICE:

(written)

(figures)

**RATES - SCOPE OF WORK ELEMENTS 2 (BIDDING SERVICES) and 3
(ADMINISTRATIVE SERVICES DURING CONSTRUCTION)**

Submit schedule of rates, multipliers, etc. as per Scope of Work

BUSINESS NAME: _____

ADDRESS: _____

SIGNED: _____

TITLE: _____

PRINT NAME: _____

DATE: _____

PHONE: _____

FAX: _____

E-MAIL: _____

FIN: _____

Town of Narragansett
Engineering Department
Sanitary Sewer Collection System Infiltration / Inflow (I/I) Study

Request for Proposal & Scope of Work

I. INTRODUCTION – The Town of Narragansett, Rhode Island is soliciting proposals from qualified firms to conduct a Sewer System Evaluation Survey (SSES) of the Sanitary Sewer Collection system tributary to the Town’s Congdon Street Pump Station in the Pier neighborhood. The study shall comprehensively achieve the project purpose: a.) identify and determine the specific locations and estimated flow rates for all sources of Infiltration and Inflow (I/I) in the study area. b.) Prepare a report documenting I/I findings, & c.) Recommend methods of rehabilitation and estimate costs of rehabilitation for each identified source of I/I.

II. BACKGROUND – As described above, the project area consists of the entire sanitary sewer collection system tributary to the Congdon Street Pump Station in the Pier Area of Town. A map delineating the Project Area is attached herewith as Exhibit C. The Pier area is located in the center of Town, and is one of the oldest neighborhoods in Narragansett. Accordingly, the sanitary sewers are some of the oldest in Town, with some portions dating to the late 19th century. In the late 1980s and early 1990s, many of the original sanitary sewer mains were replaced with PVC. The Congdon Street Pump Station is located at the intersection of Congdon Street and Ocean Road. The current pumping capacity of the Pump Station is 225 gpm. In 2004, the Town conducted an I/I study which included portions of the project area. Several rehabilitation recommendations resulted from that study, of which only miscellaneous pipe repairs were executed. Despite the aforementioned pipe replacements and repairs, the Congdon Street Pump Station exhibits inundating flows during and immediately following rain events. This indicates excessive I/I within the study area collection system which the Town is endeavoring to mitigate.

The sanitary sewer collection system within the Study Area consists of approximately 10,500 linear feet of sewer mains which includes approximately 51 sewer manholes. Within the project area, approximately 160 buildings are connected to the sanitary sewer system, which are predominantly residential single family dwellings.

III. SCOPE OF WORK –

The required scope of work shall include three (3) phases:

1. Conducting a Sewer System Evaluation Survey (SSES);
2. Bidding Services for proposed sewer system rehabilitations;
3. Administrative services during construction of sewer system rehabilitations.

1. SEWER SYSTEM EVALUATION SURVEY – (SSES)

The Consultant shall perform a comprehensive Sanitary Sewer Evaluation Survey (SSES), consistent with the methodologies and procedures as specified in the Massachusetts Dept. of Environmental Protection document entitled “*Guidelines for Performing Infiltration/Inflow Analyses and Sewer System Evaluation Survey*” dated revised January, 1993 (GUIDELINES). More specifically, the SSES shall include the following. Specific SSES work items listed below shall be conducted in conformance with the GUIDELINES where applicable:

- A. **PROJECT MANAGEMENT** – In addition to general project management and administrative activities, the Consultant shall identify a project manager who will be the contact person for this project. The Project Manager will be required to conduct a minimum of five (5) monthly job meetings to be held at Town offices. The Project Manager and the Consultant shall attend any and all meetings as directed by the Town. The Project Manager will also be responsible for making two (2) status presentations at project milestones to be specified by the Town. Measurement and Payment: This work will not be measured. This work shall be paid for as part of the lump sum prices for “Sewer System Evaluation Survey”, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Town.
- B. **PREPARATION OF PERMITS** – If state permits are required for the execution of the SSES, the Consultant shall prepare and obtain all necessary state and local permits. Payment: This work shall be paid for as part of the lump sum prices, unit bid prices and alternate bid prices, if any, for respective bid items under the work of this item, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Town. Measurement and Payment: This work will not be measured. This work shall be paid for as part of the lump sum prices for “Sewer System Evaluation Survey”, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Town.
- C. **RAINFALL MONITORING** – Consultant shall perform this task in conformance with the GUIDELINES. One continuous recording tipping bucket rain gauge shall be installed and monitored within the study area. In addition, other less-site-specific rainfall data shall be obtained and evaluated. Rainfall monitoring shall be performed for the duration of the project. At least two storm events which cause inundation of the Congdon Street Pump Station shall be recorded. Measurement and Payment: This work will not be measured. This work shall be paid for as part of the lump sum prices for “Sewer System Evaluation Survey”, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Town.
- D. **FLOW MONITORING** – including FLOW ISOLATION MONITORING. Consultant shall provide, install, and monitor at least three continuous flow monitors. Flow monitoring shall be conducted in accordance with section IV.2 and V.3.1 of the

GUIDELINES. Measurement and Payment: This work will not be measured. This work shall be paid for as part of the lump sum prices for “Sewer System Evaluation Survey”, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Town.

- E. **EXTENSIVE MANHOLE INSPECTION** – All manholes within the study area shall be inspected in conformance with the GUIDELINES. All manholes that are identified as “buried” or not visible at the ground surface shall be reported to the Town. If the Town is able to uncover such manholes to provide access, all such manholes shall be included within the SSES. All Manhole Inspections shall include an estimation of groundwater level by the “wet-ring” method as described in the GROUNDWATER MONITORING section of the GUIDELINES. Estimated groundwater depth shall be reported both on the individual manhole inspection form and summarized in the SSES report. The SSES report shall also provide an analysis of the groundwater monitoring results.

All Manhole inspections and deliverables shall be performed in conformance with the GUIDELINES and NASSCO PACP and MACP as applicable. The Consultant shall provide digital records of all manhole inspections including color photographs. The digital records and viewing software shall be compatible for installation and use on a personal computer with Windows Vista operation system.

Measurement and Payment – Manhole Inspection shall be measured per each manhole actually inspected per this scope of work. This work shall be paid for as the unit price bid item for “EXTENSIVE MANHOLE INSPECTION”, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Town.

- F. **SMOKE TESTING** – All Sewer Mains in the Project Area shall be smoke tested in accordance with the GUIDELINES, NASSCO PACP and MACP as applicable, and Exhibit A “Smoke Testing Wastewater Collection Systems”, attached herewith.
Measurement and Payment - Smoke Testing shall be measured as the horizontal distance (in linear feet) as measured between the centers of the two manholes of the sewer main actually smoke tested. This work shall be paid for as the unit price bid item for “SMOKE TESTING SEWER MAINS”, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Town.

- G. **RAINFALL SIMULATION: DYED WATER TESTING** – All identified and suspected possible inflow sources shall be tested in accordance with the GUIDELINES. The use of closed circuit television shall be utilized to facilitate this task.

Measurement and Payment – Dyed Water Testing shall be measured per each identified and/or suspected inflow source actually tested per this scope of work. This work shall be paid for as the unit price bid item for “DYED WATER TESTING”, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Town.

- H. **RAINFALL SIMULATION: DYED WATER FLOODING** - Identified and suspected possible inflow sources shall be tested in accordance with the GUIDELINES, as directed by the Town. The use of closed circuit television shall be utilized to facilitate this task.

Measurement and Payment – Dyed Water Flooding shall be measured as the horizontal distance (in linear feet) of the storm sewer actually tested . This work shall be paid for as the unit price bid item for “DYED WATER FLOODING” , including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Town.

- I. INTERNAL BUILDING INSPECTIONS – Consultant shall perform inspections in conformance with the GUIDELINES.

Measurement and Payment –Internal Home Inspections shall be measured per each building actually inspected per this scope of work. This work shall be paid for as the unit price bid item for “INTERNAL BUILDING INSPECTIONS, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Town.

- J. FLOW DATA EVALUATION & ANALYSIS – This item shall be conducted in conformance with the GUIDELINES.

Measurement and Payment: This work item will not be measured for payment. This work shall be paid for as part of the lump sum prices for “Sewer System Evaluation Survey”, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Town.

- K. CLOSED CIRCUIT TELEVISION INSPECTION: SEWER MAINS & SEWER LATERALS – All Sewer Mains in the Project Area shall be cleaned and inspected by closed circuit television accordance with the GUIDELINES, NASSCO PACP and MACP as applicable, and Exhibit B “SPECIFICATIONS – CLEANING AND TELEVISIONING OF SANITARY SEWER SEWERS”, attached herewith. In addition, all sewer laterals (from the sewer main to the building) shall be inspected in conformance with the GUIDELINES, NASSCO PACP and MACP as applicable utilizing a CUES LAMP II lateral and mainline probe (or similar acceptable to the Town) televising device capable of being deployed into lateral pipes and through Y connection(s) if necessary. In addition, Television Inspection shall be utilized as necessary in conjunction with other SSES study tasks as necessary to facilitate the project purpose which is identify and determine the specific locations and estimated flow rates for all sources of Infiltration and Inflow (I/I) in the study area. The Consultant shall provide digital records of all televising and viewing software in format in conformance with NASSCO PACP and MACP. The digital records and viewing software shall be compatible for installation and use on a personal computer with Windows 7 64 bit operating system.

Measurement and Payment – Closed Circuit Television Inspection shall be measured as the horizontal distance (in linear feet) as measured between the centers of the two manholes of the sewer main actually inspected. This work shall be paid for as the applicable unit price bid item for either “Closed Circuit Television Inspection: Sewer Mains” or “Closed Circuit Television Inspection: Sewer Laterals” , including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Town.

- L. **TRAFFIC CONTROL** – Consultant shall prepare and implement all required maintenance and movement of traffic (MMOT) plans as required by state and local agencies. The Consultant shall be responsible for furnishing all materials and manpower (including traffic officers if required) necessary to execute the required MMOT plan. Measurement and Payment: This work item will not be measured for payment. This work shall be paid for as part of the lump sum prices for “Sewer System Evaluation Survey”, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Town.
- M. **PREPARATION OF REPORT** – The Consultant shall prepare a report in conformance with the GUIDELINES. The report shall include include separate sections for each above SSES work task, as well as summaries and appendices as appropriate. In addition to the reporting requirements specified above, the report shall include clear, concise maps as necessary to illustrate the findings of the SSES. Maps shall be prepared utilizing Autodesk software, version 2007 or newer. The Consultant shall furnish five (5) hard copies of the report as well as an electronic copy in Adobe .pdf format. All report maps shall also be furnished to the Town electronically in Autodesk format.

The Report shall provide detailed mitigation recommendations for each I/I defect identified in the SSES. The recommendations shall describe detailed, specific rehabilitation measures to resolve each I/I defect. Each I/I defect for which rehabilitation is proposed shall be ranked according to severity of defect. The Consultant’s opinion of cost shall be furnished for all proposed rehabilitation items.

Prospective bidders shall submit a recent sample of an engineering report a for similar project with their bid.

Measurement and Payment: This work will not be measured. This work shall be paid for as part of the lump sum prices for “Sewer System Evaluation Survey”, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Town.

- N. **PREPARATION OF SCOPES OF WORK FOR PROPOSED REHABILITATIONS** – For each The Consultant shall prepare and furnish to the Town complete scopes of work appropriate for inclusion in a RFP to be completed by the Town. Scopes of work shall be prepared in CSI/CSC Specification format. Measurement and Payment: This work will not be measured. This work shall be paid for as part of the lump sum prices for “Sewer System Evaluation Survey”, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Town.
- O. **MISCELLANEOUS** – The Consultant shall incorporate the following considerations:
1. Underground utilities mapping information provided by the Town of Narragansett does not show all underground utilities. The Consultant is responsible for identifying underground utilities not shown on the Town mapping to the extent necessary to conduct

the SSES and to ensure safety of Town, Consultant, sub-contractor personnel and the public. The Consultant shall contact Dig-Safe at 72 hours prior to the commencement of any work causing subsurface disturbance that may be associated with conducting SSES operations. The Town does not participate in Dig-Safe.

2. Town has mapped the sewer collection system within the study area and Town-wide. The Town will provide the consultant with existing mapping and currently available “as-built” sewer plans. The consultant shall verify collection system configuration and report any discrepancies. If discrepancies are encountered, Consultant shall determine actual system configuration and provide sketch of correct system configuration. Consultant shall identify and locate any system components not shown on the Town’s existing system mapping, including identifying and locating all manholes not visible at the ground surface.

3. The Water system within the study area is not owned or operated by the Town. The Consultant shall coordinate with the water system operator, United Water, for all water use required to properly conduct the SSES. Water use charges by United Water will be paid for by the Town.

4. The Consultant shall be responsible for cleaning pipes, structures, and other collection system components as necessary to properly conduct the SSES. The Consultant shall also be responsible for the proper disposal of waste and/or debris resulting from cleaning operations.

5. COORDINATION WITH LOCAL RESIDENTS – a.) The Consultant shall be responsible for obtaining permission from all property owners for all tasks requiring entry onto or in to private property. The Consultant shall be responsible for contacting property owners to schedule entry to properties. Repeated contact of property owners shall be required if necessary by the consultant until a property entry is scheduled and conducted. The Consultant shall be available outside normal business hours if necessary to facilitate property owner’s schedules as it relates to their availability to provide property access to the Consultant. b.) The Consultant shall coordinate access with private property owners prior to work that will restrict access or use of property to property occupants.

6. All studies to determine infiltration shall be performed during a period of high groundwater conditions and in conformance with the GUIDELINES.

7. REGULATORY COMPLIANCE – All equipment operators and inspectors shall be trained and licensed per NASSCO PACP and MACP as appropriate. All required licenses for work being performed shall be in the possession of the person(s) while performing the work. The Consultant shall provide a ‘Competent Person’, as defined by OSHA on location for all applicable work. The Consultant shall be responsible solely responsible to conduct their operations in a manner that meets all applicable local, state, and federal regulations including RIDEM, CRMC, USEPA, OSHA and labor and

equipment licenses. Contractor shall also comply with all permits, if any, issued for this project.

8. The Town will not reimburse the Consultant separately for travel costs. All travel costs attributable to this project shall be incorporated into the Lump Sum fee.

9. The Consultant shall provide the Town with a criminal history check (from the RI Attorney General's office) for any employee whom may be assigned to work involving entry on to private property. The Town reserves the right to disallow any employee with an unacceptable criminal history.

Measurement and Payment: This work will not be measured. The above stated MISCELLANEOUS work shall be paid for as part of the lump sum prices for "Sewer System Evaluation Survey", including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Town.

The Town Shall Provide the Consultant with the following:

1. System drawings in hard copy and electronic (Autodesk) formats.
2. Assistance locating manholes (on an as-needed basis).
3. Pavement cutting and/or excavation necessary to access manholes that are not currently visible at the ground surface, as may be necessary to properly conduct the SSES.
4. Providing copies of record plans or sanitary sewer system components.
5. Provide Consultant with copy of 2004 I/I study.
6. Provide the Consultant with water use records and Congdon Street Pump Station pumping records.
7. Accompany Consultant as necessary at internal home inspections.

2. BIDDING SERVICES – shall include answering questions and issuing addenda as necessary during the advertising and bidding phase for the construction (of proposed sewer system rehabilitations) phase of the project, evaluating bids that are received, and providing a written bid evaluation and recommendation for an award of a construction contract.

3. ADMINISTRATIVE SERVICES DURING CONSTRUCTION – shall include the following:

- Review of shop drawings, catalog cuts, and product submittals for the conformity with the construction contract documents;
- Review of applications for payment and change orders, and written recommendations for same;
- Periodic job meetings to monitor and report on the construction progress and to provide interpretations as to the intent of the construction contract documents;
- Field inspection services as necessary to ensure contract compliance with construction contract documents;
- Preparation of as-built drawings (paper and electronic)

IV. QUALIFICATIONS

1. All work is to be performed by firms or individuals within firms having at least ten (10) years' experience in conducting Sewer System Evaluation Surveys. Firms and/or individuals must have detailed and relevant experience with the applicable Federal and State regulations and programs, as well as professional organization standards and criteria.
2. A Statement of Qualifications must be submitted as a part of the respondent's proposal, including a listing of key personnel to be assigned to this project (organizational chart and resumes), relevant experience of the firm and the key personnel, and other pertinent information which identifies the respondent's ability to perform the work elements listed in Section III "Scope of Work" of this Request for Proposals. A separate list of all intended sub-consultants must also be provided, identifying the tasks for the sub-consultant and the (proposed) relationship between the respondent and the sub-consultant (i.e. joint venture, straight sub-consultant basis, etc.). Similar qualifications information is to be supplied for each proposed sub-consultant.

V. SUBMISSION OF PROPOSAL

Interested parties are to submit three (3) copies of a Bid Proposal addressing, at a minimum, their approach to satisfying the requirements stipulated with Section III "Scope of Work" of this Request for Proposals. Included within the Technical Proposal shall be sufficient information that would identify the consultant's ability to perform the work within the given project timetable. Particular emphasis should be placed on the consultant's experience with conducting sanitary sewer system evaluation surveys and design of sanitary sewer system rehabilitations to remove infiltration and inflow.

Included within each Bid Proposal shall be a Cost Proposal detailed on the included bid form for all work required under this Request for Proposals.

VI. PROJECT TIMETABLES AND DELIVERABLES

- Solicitation of Proposals: January 27, 2012 – February 15, 2012
- Submission of Proposals: February 15, 2012 @ 11:00 AM
- Selection of Consultant/Award: March 8, 2012 (Tentative)

Timetable for conducting project tasks: Consultant shall commence project within fifteen (15) working days of the date of the Town's Notice to Proceed. Schedule for conducting various portions of SSES field tasks shall be determined by the Town based on environmental conditions. A Draft of the final SSES report shall be delivered to the Town within 30 working days following the completion of field tasks. The Town intends to construct proposed sewer system rehabilitation in the 2012 construction season.

Electronic file submissions shall be in the appropriate format as follows: text, (reports, etc.) latest version of Microsoft Word and Adobe. Tables, graphs, charts, etc.

shall be in the latest version of Microsoft Excel and Adobe. Drawings shall be prepared and delivered in AutoCAD Version 2010 or earlier.

Proposals in the form and quantity specified shall be submitted on or before 11:00 AM, February 15, 2012 to:

Susan Gallagher, Purchasing Agent
Town of Narragansett
25 Fifth Avenue
Narragansett, RI 02882
(401) 789-1044 (Ext. 644)

Questions concerning the overall content of this Request for Proposals should be addressed to:

Jeffrey Ceasrine, P.E., Town Engineer,
or John Lawless, P.E., Project Engineer
Town of Narragansett
25 Fifth Avenue
Narragansett, RI 02882
(401) 789-1044

VII. FORM OF AGREEMENT

The successful respondent shall enter into an agreement in the specific format as attached herein. There will be no deviation from this standard allowed. It is the intent of the Town to award a contract under the RFP for professional services, then award a single construction contract for sewer system rehabilitations after the Town prepares contract document and executes a public bidding process. At that point, using the rates provided for under Scope of Work Section 3 “Administrative Services During Construction”, the Town of Narragansett reserves the sole right to negotiate a contract amendment for said administrative services with the selected engineering firm.

VIII. SELECTION CRITERIA

This will be a “Qualifications Based Selection (QBS)” process. Proposals will be examined and technically evaluated based on the factors presented below. It is the responsibility of the CONSULTANT to provide information, evidence or exhibits which clearly demonstrate the ability to satisfactorily respond to the project requirements and the factors listed below. The Town will select the top ranked firm based on the criteria herein as it may apply to the specific Scope of Work.

A. Company Qualifications and Experience (Maximum 25 points)

Specialized design and engineering experience is required of the company in a series of work areas - proposals must clearly demonstrate full knowledge, understanding,

and experience in the methods, techniques, and guidelines required for the performance of the required work:

1. Experience demonstrated on similar projects.
2. Knowledge of current issues and state of the art techniques in the relevant technical areas.
3. The ability to provide the necessary skills and expertise from in-house resources.
4. Methods for assuring product quality, cost control, delivery schedule, and project oversight (a narrative description of the CONSULTANT's quality control plan must be included).
5. The CONSULTANT should address the proposed level of effort by task for each employee category.
6. The ability to demonstrate proficiency in engineering report writing specific to the requirements of the scope of work. Prospective Bidders shall submit a sample report with their bid for a project similar to this Scope or Work.

All preceding elements are of equal importance.

B. Personnel Qualifications and Availability (Maximum 25 points)

Specialized experience is required of the project personnel proposed to undertake the work assignments - proposal must clearly demonstrate the capability, academic background, training, certifications and experience of the proposed personnel:

1. Availability of the proposed staff must be demonstrated.
2. A demonstrated expertise and ability for rapid turn-around and flexibility on short-term projects.
3. Project Manager(s) must have the ability to effectively direct multiple simultaneous work assignments.
4. Project Manager(s) must have the ability to integrate and utilize interdisciplinary teams effectively on assignments requiring a variety of skills and expertise from in-house resources.

C. Performance Record of Firm (Maximum 15 points)

A list of references of at least three (3) recent contracting officers on projects of a similar magnitude and complexity; references must include telephone number and affiliation.

D. Project Understanding (Maximum 15 points)

The CONSULTANT must demonstrate a comprehension of the role and function of this contract in meeting the needs of the Town. In addition CONSULTANT shall have a working knowledge of the geographic area as evidenced by prior work experience in the region.

E. Cost Evaluation (Maximum 20 points)

Cost will be considered as an independent factor from the above evaluation factors. The cost proposal will be evaluated not only to determine whether it is reasonable, but also to determine the CONSULTANT's understanding of the magnitude of the Scope of Work and ability to complete the contract.

X. EVALUATION PROCEDURE

A review team consisting of Town of Narragansett senior staff members (including the Wastewater Superintendent, Town Engineer, and Project Engineer) will review and rank all proposals that are received. A recommendation will then be made to the Purchasing Agent, and subsequently to the Town Council for an award.

The evaluation process will include a point scoring scheme as follows:

A. Technical Evaluation

- 1) Company Qualifications and Experience - (Maximum 25 points)
- 2) Personnel Qualifications and Availability - (Maximum 25 points)
- 3) Performance Record - (Maximum 15 points)
- 4) Project Understanding - (Maximum 15 points)

B. Cost Evaluation

- 1) Calculated by: (Lowest Cost Proposal for all combined Lump Sum Bid Items/Cost Proposal in question) x 20 points - (Maximum 20 points)

*Note: Pursuant to R.I.G.L. 45-55-8.1, the ultimate selection shall be determined by the Qualification-Based Selection Process outlined by the Rhode Island Consulting Engineers (RICE), regardless of the bid proposal prices.

AGREEMENT

FOR PROFESSIONAL SERVICES

RELATING TO THE

**“SEWER SYSTEM EVALUATION SURVEY – CONGDON STREET PUMP STATION
SEWER AREA”**

BETWEEN

THE TOWN OF NARRAGANSETT

AND

THIS AGREEMENT made and entered into this ____ day of _____ by and between the Town of Narragansett, hereinafter called the "CLIENT" and _____ hereinafter called the "CONSULTANT".

WITNESSETH, that in consideration of the mutual covenants and agreements herein contained, the parties hereto do mutually agree as follows:

ARTICLE 1 - EMPLOYMENT OF THE CONSULTANT: The CLIENT hereby employs the CONSULTANT and the CONSULTANT agrees to perform professional services hereinafter relating to the **SEWER SYSTEM EVALUATION SURVEY – CONGDON PUMP STATION SEWER AREA.**

ARTICLE 2 - RESPONSIBILITY OF THE CLIENT: The CLIENT will furnish the CONSULTANT and shall assist him/her in obtaining from Town and State agencies and private individuals or companies such information and data as are available and pertinent to the work contemplated under this Agreement. The CONSULTANT shall have the right to rely upon such data and information that appears to be credible and shall not be responsible for any inaccuracies of deficiencies contained therein. In general, the CLIENT shall:

1. Provide utility (sanitary sewer, storm drain, water distribution) and transportation maps, and other resource mapping as available and where necessary for the completion of the Project.
2. Provide all available data related to the Project, as well as previous related plans and studies.
3. Provide all data on proposed planning projects in the project areas.
4. Designate, when necessary, a representative authorized to act in this behalf with respect to the Project. The CLIENT shall examine documents submitted by the CONSULTANT and shall render decisions pertaining thereto promptly, to avoid unreasonable delay in the progress of the CONSULTANT'S services.
5. Furnish information required of him/her as expeditiously as necessary for the orderly progress of the Work.
6. Give prompt written notice if he/she becomes aware of any fault or defect in the Project or non-conformance with the Contract Documents.

ARTICLE 3 - CHARACTER AND EXTENT OF SERVICES: The CONSULTANT shall furnish the CLIENT the professional services in accordance with the Scope of Work items referenced within the Request for Proposals and/or as negotiated herein for each specific project. The Request for Proposals and other elements relating to a Scope of Services is attached as Exhibit "A" to this document. These services will be completed on or before the dates stipulated

within the Request For Proposals.

ARTICLE 4 - COMPENSATION FOR PROFESSIONAL AND SUPPLEMENTAL SERVICES:

Compensation to CONSULTANT for professional services shall be based upon and measured by the following elements which are set forth below:

1. For providing all of the professional services as described in Exhibit "A", the CLIENT shall reimburse the CONSULTANT in accordance with the approved compensation schedule which shall represent the full compensation for all of the required services.
2. The CLIENT may, at his/her discretion, retain up to ten (10) percent from each payment request that is submitted and approved. Said retainage, if withheld, shall generally be for tasks/items that require outside (i.e. regulatory) approval, and shall be released upon receipt of said approval. Said retainage may also be withheld for tasks/items that require typical start-up services for design contracts, and shall be released upon satisfactory completion of same.
3. Supplemental Services. For performance of work beyond the Scope of Services as described in Exhibit "A", compensation shall be as set forth within the following Schedule of Charges.

Schedule of Charges

A. FEES: To be negotiated upon the actual Scope of Work.

B. OTHER CHARGES:

Reimbursables - These charges, as may be negotiated and approved in advance by the Town, are in addition to the fee for services and shall include actual expenditures made in the interest of the project such as: transportation and living when traveling in connection with the project; reproductions of drawings, specifications and reports except for copies for CONSULTANT'S internal use, photography, models and renderings, equipment rental, postage and delivery charges on any of the preceding. An administrative charge to be negotiated shall be applied to all reimbursables except for automobile mileage, which will be reimbursed at the rate established by the IRS.

Consultants - Consultant or other outside services such as, but not limited to, laboratory testing, boring contractors, etc., engaged by CONSULTANT pursuant to ARTICLE 6 for project services shall be billed at a negotiated multiple times the amount billed to CONSULTANT.

Taxes - Taxes such as, but not limited to, Value Added Tax (VAT), State Sales Tax, excise or gross receipts tax imposed on CONSULTANT'S services shall be

added to the compensation or fees. The taxes would not apply if waived through application of tax-exempt status.

4. Payment for these services shall be made monthly in proportion to the services performed as determined by the CONSULTANT and agreed to by the CLIENT. The monthly invoice will list tasks and percent completed to date. Payment will be based on the percentages complete for each task.
5. Balance outstanding more than sixty (60) days from date of invoicing shall bear interest at a rate of one (1) percent per month. The amount of interest charged shall not exceed twelve (12) percent per year. If the CLIENT fails to make any payment due CONSULTANT within sixty (60) days of the date of invoicing, the CONSULTANT may, after seven (7) days written notice to the CLIENT, suspend services under this Agreement until the CONSULTANT has been paid in full amounts due it on account of services and expenses.
6. Failure to pay invoices within sixty (60) days from date of invoicing shall grant CONSULTANT the right to refuse to render further services and such actions shall not be a breach of any contractual agreement with the CLIENT.

ARTICLE 5 - REVISION OF WORK: If, after the CONSULTANT has been authorized to proceed with the work under this Agreement, the CLIENT shall set aside the whole or any part of the CONSULTANT'S studies, drawings or specifications or shall make such changes in the requirements as shall necessitate redesigning and/or redrawing, the CLIENT shall pay the CONSULTANT as provided in ARTICLE 4 above for the work required by the redesigning and/or redrawing.

ARTICLE 6 - ADDITIONAL WORK: If, during the performance of this Agreement, other or additional services are required in connection with this Agreement, the CLIENT may order the CONSULTANT to perform such other or additional services, payment to the CONSULTANT for same shall be as provided in ARTICLE 4 above. In order to be eligible for payment for any such other or additional services, CONSULTANT must receive, prior to commencement of the work the prior written authorization from CLIENT.

ARTICLE 7 - ABANDONMENT OF PROJECT: If the CLIENT shall, at any time during the performance of this Agreement, deem it expedient or it shall become necessary for the CLIENT to abandon or involuntarily defer the Work under this Agreement or any part thereof before completion of the services to be rendered hereunder, the CONSULTANT shall be entitled to compensation for any uncompensated Work performed prior to such time. Payment to the CONSULTANT for same shall not exceed the negotiated fee set forth in ARTICLE 4 and shall be based upon the proportion of service completed as of the date of termination.

ARTICLE 8 - TERMINATION: In the event that either party hereto shall default in its obligations substantially to perform in accordance with the terms of this Agreement, the other party may demand, in writing, that such default be cured within thirty (30) days. Where the defaulting party has failed to cure within the foregoing time frame, the other party may then

terminate this Agreement by giving fifteen (15) days written notice of termination provided, however, that where compliance with the terms of this Article may put the terminating party in non-compliance with any federal or state law, regulation, administrative or court order, or any other legal requirement, then, in that event, the terminating party may terminate this Agreement by giving 48 hours written notice to the other party.

ARTICLE 9 - INDEMNIFICATION: The CLIENT shall indemnify and hold harmless the CONSULTANT and the CONSULTANT'S agents and employees from any liability or claim arising out of the negligence of the CLIENT or his Agents, Servants, and independent Contractors in the performance of work contemplated under this Agreement. The CONSULTANT shall indemnify and hold harmless the CLIENT and the CLIENT'S agents and employees from any liability or claim arising out of the negligence of the CONSULTANT or his Agents, Servants and independent Contractors in the performance of work contemplated under this Agreement.

ARTICLE 10 - LIFE AND LIMITATIONS OF THE AGREEMENT:

- A. It is agreed that in the event that the CONSULTANT is required by CLIENT to appear in litigation and/or arbitration for or on behalf of the CLIENT, that it shall receive additional compensation therefor. Reimbursement for such services shall be as described in ARTICLE 4, Paragraph 3, SUPPLEMENTAL SERVICES.
- B. It is agreed that this Agreement shall remain in full force until the Work is completed and payment made therefore to the CONSULTANT, except that the indemnification as defined in ARTICLE 10 shall survive the contract.
- C. The CONSULTANT, in its preparation of construction cost estimates, uses its best judgment as a professional familiar with the construction industry. It is recognized that neither CONSULTANT nor the CLIENT has control over the cost of labor, materials, or equipment, over the Contractor's methods of determining bid prices, or over competitive bidding market or negotiating conditions. Accordingly, CONSULTANT cannot and does not warrant or represent that Bids received or negotiated prices will not vary from the original estimates that were provided to the CLIENT.
- D. During the term of this Agreement, CONSULTANT shall maintain insurance coverage in the types and amounts specified in Exhibit B, while it is hereby incorporated by reference and made a part of this Agreement.

Insurance certificates evidencing the above insurance coverage shall be provided by CONSULTANT within ten (10) calendar days of an acceptance of a proposal for professional services. In the event of cancellation of any of the insurance coverages contemplated by this Agreement, CONSULTANT will provide 48 hours written notice to the CLIENT.

In the event of any change to any of the insurance coverage contemplated by this Agreement, CONSULTANT will provide not less than 20 days prior written notice to

CLIENT of any such change.

ARTICLE 11 - GOVERNING LAW: This Agreement shall be construed and enforced in accordance with the laws of the State of Rhode Island.

ARTICLE 12 - SUCCESSORS AND ASSIGNS: The CLIENT and CONSULTANT respectively bind themselves, their partners, successors, assigns and legal representatives to the other Party to this Agreement and to the partners, successors, assigns and legal representatives of such other Party with respect to all covenants of this Agreement. Neither the CLIENT nor CONSULTANT shall assign, sublet or transfer any interest in this Agreement without the written consent of the other and such consent shall not be unreasonably withheld.

ARTICLE 13 - NOTICES: All notices required hereunder shall be given in writing to the parties' certified mail, return receipt at the following address:

CONSULTANT

Town of Narragansett
Town Manager
Town of Narragansett
Town Hall
Narragansett, RI 02882

ARTICLE 14 - CONSULTANTS' ACCOUNTING RECORDS: Records of expenses and for services performed on the basis of a multiple of Direct Personnel Expenses shall be kept on a generally recognized accounting basis and shall be available to the CLIENT or his authorized representative for either review or audit at mutually convenient times.

ARTICLE 15 - OWNERSHIP AND USE OF DOCUMENTS: Drawings, Reports, Specifications and other Documents prepared by CONSULTANT shall become the property of CLIENT.

ARTICLE 16 - EXTENT OF AGREEMENT: This Agreement represents the entire and integrated Agreement between the parties and supersedes all prior negotiations and representations. Nothing herein shall be deemed to create any contractual relationship between the CONSULTANT and any other CONSULTANT or Contractor or material supplier on the Project, nor to furnish any notices required under other such contracts, nor shall anything herein be deemed to give anyone not a party to this Agreement any right of action against a party which does not otherwise exist without regard to this Agreement.

Town of Narragansett
Sewer System Evaluation Survey – Congdon Pump Station Sewer Area

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in triplicate as of the day and year first above written.

CONSULTANT

TOWN OF NARRAGANSETT

25 Fifth Avenue
Narragansett, RI 02882

By: _____ By: _____
Town Manager

Witness: _____ Witness _____

Town Council Authorization:

Agenda Item #: _____

Date: _____

Approved as to form and legality

By: _____

Mark A. McSally, Town Solicitor

EXHIBIT A

SCOPE OF SERVICES

1. This is an Exhibit attached to, made a part of, and incorporated by reference into the "Agreement for Professional Services Relating to the "SEWER SYSTEM EVALUATION SURVEY – CONGDON STREET PUMP STATION SEWER AREA" Project (hereinafter called the "Agreement") made on _____ between the Town of Narragansett ("CLIENT") and _____ ("CONSULTANT") providing for professional services.

2. The complete Request for Proposals package entitled "SEWER SYSTEM EVALUATION SURVEY – CONGDON STREET PUMP STATION SEWER AREA ", and the CONSULTANT'S proposal dated _____ are included herein by reference and constitute the required Scope of Work.

--End of Exhibit A--

EXHIBIT B

INSURANCE REQUIREMENTS

In accordance with ARTICLE 10, Paragraph D, the CONSULTANT shall maintain the following insurance coverages during the entire period of this Agreement.

<u>Type</u>	<u>Amount</u>
Worker's Compensation	(Per Statute)
Employer's Liability	\$100,000.00
Comprehensive General Liability and Property Damage Liability	\$1,000,000.00
Automobile Liability and Property Damage Liability	\$500,000.00
Valuable Papers	\$150,000.00
Professional Liability	\$1,000,000.00

EXHIBIT A

EXHIBIT A - SMOKE TESTING WASTEWATER COLLECTION SYSTEMS

PART 1--GENERAL

1.01 SCOPE

It is the intent of these specifications to provide for the smoke testing materials and procedures to be used in the investigation of the sanitary sewer facilities as shown on the Project Maps. All materials and procedures shall be consistent with these specifications, current industry standards, and as approved by the Town.

The nature of the smoke testing inspections shall be to confirm system connectivity, identify gravity sewer system defects and to provide a permanent record of the defects including type, location, and severity. Inspections will be performed by introducing non-toxic smoke into the sanitary sewer pipes using a high capacity blower, observing smoke exiting vent stacks and at defect locations, and documenting the defects.

All sewer mains within the Project Area shall be smoke tested.

1.02 REQUIREMENTS

The Consultant shall inspect the gravity sanitary sewer system using high capacity (minimum 4500 cfm) blower, non-toxic smoke, sub-meter GPS equipment, safety equipment suitable for the field conditions and a digital camera for documentation.

All inspections shall be recorded on standard smoke testing forms.

All inspection forms shall be scanned and submitted as a single .PDF file (each page numbered).

Digital photographs in .JPG format (see Part 3 for image naming and resolution requirements) shall be incorporated into or attached to the inspection form.

1.03 QUALITY ASSURANCE

- A. Refer to other sections for Consultant's Qualification requirements.
- B. Each Smoke Testing field supervisor shall be NASSCO PACP certified. Use of PACP certified technicians to review/document defects in the office (post process) is not acceptable.
- C. The Smoke Testing Consultant must have an internal quality assurance/quality control program in place and all inspection data shall be subjected to the procedures prior to submittal to the Town. The Town will perform QA/QC audits on submitted data.
- D. QA/QC shall be performed by NASSCO MACP certified personnel.

- E. The field crew will be of sufficient size to properly operate the smoke generation machine and provide full coverage of the area to visually locate smoke discharged from defects.
- F. All Consultant's employees performing the smoke testing under the provisions of these specifications shall be properly trained and thoroughly experienced in the use of the equipment and procedures.
- G. A list of employees to be used shall be provided to the Town. The information provided shall include the name and a copy of the driver's license of each individual. Each employee shall wear a photo ID identifying him by name, the name and contact information for the company. All job supervisors will have business cards with contact information for the supervisor and company to provide to residents if requested.
- H. The Consultant shall take appropriate action to ensure that his employees are polite to the public in all aspects of the work and that immediate assistance is provided to property owners if needed.

1.04 SUBMITTALS

The following submittals are required:

- A. Smoke production product information and Material Safety Data Sheets.
- B. The following deliverables shall be submitted at the completion of inspection:
 - 1. Electronic version (.pdf) of the smoke test field reports
 - 2. Smoke test digital photographs in JPEG format saved on CD-Rs, DVD or portable hard drives
 - 3. maps depicting smoke testing results
 - 4. Table of defects, recommended corrective action and cost estimates that includes physical property address, owner's name, and owner's mailing address.
 - 5. QA/QC report
- C. The above deliverables shall be submitted to the Town for approval.
- D. The manhole inspection reports and database shall be in accordance with Town data standards and NASSCO MACP.
- E. The Consultant shall submit one example of previous work for approval. The example shall consist of one CD or DVD of previous smoke testing inspection documentation. The submitted example shall be the work of the field supervisor or foreman to be used on this project.

Consultant shall be responsible for modifications to equipment and/or inspection procedures to achieve report material of acceptable quality. No work shall commence prior to approval of the submitted material by the Town. Once accepted, the report material shall serve as a standard for the remaining work.

1.05 NOTIFICATION

Consultant shall notify the Town a minimum of 48 hours prior to the startup of smoke testing work or re-startup following delays due to weather. Consultant will provide Town the location for the next days work at the end of each day. No payment will be made for work performed without proper notification.

PART 2--EQUIPMENT

2.01 BLOWERS

- A. The Consultant shall provide a portable blower designed and built specifically for the use of smoke testing. The blower shall be self contained and capable of producing a minimum of 4,500 cubic feet of air per minute.
- B. The base of the blower shall have appropriate adapters and seals to make a good connection to the manhole without excessive loss of air and smoke.

2.02 SMOKE PRODUCTION

- A. Smoke bombs will not be allowed on Town smoke testing projects.
- B. Smoke Fluid, or approved equal, shall produce continuous smoke that can be controlled by the testing crew. The smoke generated shall be white to gray smoke, leaving no residue, and shall be non-toxic and non-explosive.
- C. The Consultant shall supply the MSDS sheet for the Smoke Fluid to the Town

2.03 OTHER EQUIPMENT

In addition to the blower, the Consultant shall provide all other equipment, tools, and incidentals required to perform smoke testing as required by these specifications including, but not limited to, sewer line stoppers, sand bags, cameras, sub-meter GPS units, confined space entry equipment, and traffic control equipment.

PART 3--EXECUTION

3.01 WORK PROGRESS – The work shall generally progress as follows:

- A. The Consultant shall apply for and obtain work permits for all work to be performed in State and/or Town Highways. All required insurances, traffic control measures, and other terms of the permit shall be provided to the satisfaction of the Town.
- B. The Consultant shall have all required submittals reviewed, including, but not limited to, the field inspection forms and database deliverable, by the Town. Work shall not proceed until acceptance of all submittals by the Town.
- C. The Town shall provide to the Consultant a spreadsheet listing all physical property addresses, owner's name, and owner's mailing address to be used for Pre-notification mailers and summary of defects and corrective actions.
- D. Pre-Notifications – The Consultant shall provide a mailed notice 10-14 days prior to commencement of smoke testing to all affected residents. The Town approved mailer template will be provided by the Town to the Consultant for completion of contact information, printing and distribution by the Consultant.
- E. Daily Notifications
 - 1. The Consultant shall notify, by hand delivery, a Town approved door hangers to each address, all residences and businesses in the area to be tested. Town approved notifications will be provided to the Consultant for printing and distribution. The Consultant shall place door hangers on all residences and business 2-7 days prior to smoke testing at those specific addresses. Door hangers shall be an ongoing process throughout the project and shall be limited to the area provided in the look ahead schedule. Door Hangers shall not be placed for areas which will not be tested within 7 days. If smoke testing is delayed for more than 7 days due to rain, etc., the area shall be re-notified by door hangers. Logs will be maintained to document notification of special needs facilities such as hospitals, nursing homes, schools, high rise buildings, etc. The logs will include the facility name, date, time and individual notified.
 - 2. The day of the testing, the Consultant shall check with all residents who expressed special concerns or special needs/notification prior to testing. These needs will be accommodated to the satisfaction of the Town prior to smoke testing that section of the sewer system.
- F. Other Notifications - The Town will be responsible for prior notifications to the Town Engineering Office, Fire Department, and all contacts.
- G. It shall be the Consultant's responsibility to keep adequate records of all notifications for which they are responsible and to produce them upon request by

the Town. Failure to comply with this requirement may be cause to suspend the Consultant's operations until compliance is achieved.

- H. Perform the smoke testing (Refer to Section 3.03).
- I. Prepare and provide the smoke testing data documents.

3.02 WORK SCHEDULE

- A. Upon award of the Contract and prior to commencing any work, the Consultant shall provide a complete WORK SCHEDULE to the Town for review and approval. The schedule shall be submitted at least two (2) weeks prior to the start of smoke testing. The Work Schedule shall be typed and shall indicate the planned progress for the proposed work. The Consultant shall provide a one week look-ahead schedule and coordinate with the Town the exact locations of Smoke Testing for the upcoming week. This information will be transmitted to the Fire Rescue Department by the Town.
- B. The submitted schedule shall be accompanied by a map or detailed schedule of streets to be smoke tested each work day.
- C. The WORK SCHEDULE shall indicate the following:
 - 1. Street name (when in easements - the names of the abutting streets).
 - 2. Street limits (cross streets or property addresses).
 - 3. Upstream and downstream manhole numbers (from Project Maps).
 - 4. Date of testing.
 - 5. Starting time.
 - 6. Ending time.
- D. Acceptable Periods of Work
 - 1. The Consultant shall not commence testing before 8:00 a.m. and shall terminate testing no later than 5:00 p.m. each day.
 - 2. No testing shall be performed on weekends or holidays, unless otherwise approved by the Town.
 - 3. If the Consultant wishes to test before 8:00 a.m. or after 5:00 p.m. in commercial areas or high traffic areas, such testing shall be shown on the submitted WORK SCHEDULE and is subject to the approval of the Town.
 - 4. Work times in Commercial areas shall be scheduled prior to the opening of the majority of the businesses in that area.
 - 5. Smoke testing shall not be performed on weekends or on holidays without the prior approval of the Town.
- E. Consultant shall not perform smoke testing on days that, in the opinion of the Town, will hinder the results of the test. (For example, when high winds, heavy rains, or

excessively high groundwater levels would interfere with the effectiveness of the testing).

3.03 PERFORMING THE SMOKE TESTS

A. PROCEDURES:

1. Safety

- a. The Consultant and his personnel shall be aware of and shall follow all Federal, State, and Local safety laws and regulations.
- b. No entry into any part of the collection system shall be permitted until the Consultant has demonstrated that on-site personnel has been trained in applicable confined space safety procedures and has the equipment on-site to allow those procedures to be followed.
- c. The Consultant shall minimize the physical entry of personnel into the sanitary sewer facilities. If required, manhole entry shall be in accordance with Federal, State, and local regulations for confined space entry and other regulations that may apply. The Consultant shall provide all safety equipment required for manhole entry operations, including harnesses, ventilation equipment, etc.
- d. Traffic Control. The Consultant shall be responsible for Maintenance of Traffic. The area of work shall at all times be protected by means of an adequate number of cones, barricades, flags, or by other means necessary to properly and safely protect both vehicular and pedestrian traffic. Flag persons shall be provided in all streets.
- e. Work on Town Roads and State roads require an approved Maintenance of Traffic (MOT) plan, in accordance with Town Public Works and RIDOT requirements. Further requirements for traffic control may be imposed by the Town.
- f. Any condition deemed to be an unsafe condition shall be immediately corrected by the Consultant. The failure of the Town or his representatives to bring a potentially dangerous situation to the Consultant's attention shall not relieve the Consultant from his responsibility for providing a safe work area.

2. Unless otherwise approved by the Town, the sections of sewer subject to testing shall:

- a. Consist of a central manhole, where the blower will be positioned, and an upstream and downstream manhole and the sewer pipe between them. With three (3) manholes and two pipe sections, lengths should not exceed 800 feet.
- b. Consist of sections two (2) manholes and one pipe section. This allows a run of 400 to 800 ft of pipe. Distances greater than 400 ft radius may be tested where the length is in excess of 400 ft due to inaccessible manholes (i.e., buried, locked gates, etc.). Where smoke is not adequate, regardless of the

length, dual blowers will be placed in adjacent manholes in an attempt to increase pressure to smoke test the sewer. Where sags or blockages prevent adequate smoke tests, the Consultant will note on the inspection form the area where no smoke was observed.

3. The walk through for locating defects will not begin until smoke is highly visible with a smoke plume emanating from the plumbing vents of houses at the end of the setup location (maximum 400 ft radius) from the smoke testing machine. A colored locate flag will be placed at the location of the defect. Walkers shall traverse not only the sidewalk but between all homes and in back yards looking for illegal connections including patio, pool and roof drain connections, leakage at house laterals, broken or missing clean-out caps and storm drain cross connections. Defect flags will be provided by the Town.
 4. Flow Control - It is the intent of this specification that the smoke testing be accomplished without the need for bypass pumping. The Consultant shall provide temporary plugs, sandbags, or flow barriers as required to contain an adequate volume of smoke within the section of sewer being tested, or to limit the extent of sewer subjected to pressurized smoke. The Consultant shall monitor the resulting surcharged sewer at the manhole upstream of the section of sewer being tested, and prevent overflow conditions from occurring by removing the flow barriers or removing sewage by vacuum trucks.
 5. All smoke testing information shall be accurately and neatly recorded on field worksheets and on 100 scale maps (1 in. = 100ft.) or other maps of suitable scale as provided by the Town. The final report and information will be transferred to a computer generated log sheet together with related digital photographs taken during the project execution and a digital plan in Autodesk format.
 6. The Town may authorize QA/QC testing of specific line segments previously tested to determine the quality of testing performed and/or establish if soil conditions are sufficiently dry to continue smoke testing into new areas. Any re-testing will follow the same procedures except the re-smoke testing data deliverable will be separated from the original testing data and provided as supplemental information in an appendix to the report.
- B. TEST DOCUMENTATION
1. For each sewer main tested, the Consultant shall prepare a field log identifying each point of smoke exfiltration from:
 - a. Roof gutters.
 - b. Sewer cleanouts
 - c. Leakage in house laterals.
 - d. Patio or area drains.
 - e. Storm drain cross connections.
 - f. Any other source not stated above

- g. Indicate if roof vents showed evidence of smoke.
2. Defects shall be logged as “private”, “Water Reclamation” (for public owned infrastructure, or “commercial”.
 3. Each smoke defect, as identified above, shall be referenced by sketch and dimensioned to permanent landmarks and include the house or lot numbers. A separate sketch shall be prepared for each defect and attached to the field form.
 4. Consultant shall obtain sub-meter GPS coordinates of each defect where possible. The coordinates will be included in the Final Report, Excel summary. Town will provide the format for GPS deliverables to include State Plane Coordinate System to be used along with preferred base station to be used for post-processing, if required.
 5. In addition to GPS coordinates, the Consultant shall obtain measurements to the nearest 0.1 feet for each observed defect from a minimum of two nearby structures or permanent landmarks. These measurements shall be shown on the defect sketch page.
 6. A photograph of all leaks using a digital camera shall be included in the field log. Photographs of smoke evidence shall have a location indicated in the photograph using a defect flag, provided by the Town.
 7. All photographs shall be clearly cross-referenced to the typed and/or computer generated log indicating the location of the leak.
 8. Once the defect has been flagged the Smoke Testing Consultant shall take a digital picture (delivered in 640x480 resolution with time and date stamp on the digital photograph) showing the smoke billowing from the defect, flag, unique number, and physical features at or near the defect.
 9. Flags will be left in place at the locations of broken laterals, connected yard drains, area drains, pool/hot tub drains, roof drains, broken caps.
 10. Pictures without smoke plume from the located defect or missing visible unique number are unacceptable.
 11. For defects where capturing a picture of the smoke does not capture the defect (e.g. connected downspout), a second photo of the actual defect shall be obtained.
 12. The Consultant will provide a self standing sign (sandwich board) at each defect with minimum 4” tall numbers physically located at each defect part of the picture where possible. There shall be a unique number for each defect, clearly visible in the picture and noted on the report, record drawings and

summary spreadsheet. In the event multiple crews are working each crew will be assigned a series of unique numbers.

13. The smoke testing report shall reference the manhole numbers shown on the Project Maps. Common descriptions of defects shall utilize the current defect codes provided by the Town.

- C. Defective or missing clean out caps discovered during testing will be replaced by the Town Personnel during testing. The Consultant shall inform the Town of such missing cleanout caps. The inspection report will document the original defect location (without measurements or GPS) and notation that the repair has been made. A before and after photo will be taken at each repair location. Clean out caps will be provided by the Town.

3.04 SMOKE TESTING DELIVERABLES

- A. The Consultant shall prepare a Smoke Testing Report which shall be an appendix to the SSES report and submit in electronic format and a minimum of 4 hard copy reports. The report shall contain:
 1. Consultant letterhead, name of smoke tester, date, address of defect, description of defect, manhole to manhole (using Town standard Asset numbering), digital photograph number, inflow potential rating of defect, quarter section number, footage smoked, and sketch/map with measurements for exact location of defect.
 2. Scanned field forms and sketches in PDF format.
 3. An Excel table of all defects listing the defect number, location, address, description of defect, and inflow potential rating.
 4. Submit a minimum of four (4) complete copy of the report and the electronic report to the Town for review. Upon receiving the Town's review and comments, the Consultant shall edit or revise the report and/or electronic report as necessary and resubmit a copy of the final report (one hard copy and the electronic report) to the Town.

The Consultant shall return one set of the quarter section maps showing all the defects for the project to the Town.

Digital photographs, renamed and re-sized to 640x480 resolution shall be submitted on DVDs or portable hard drive.

3.05 ACCEPTANCE

Inspection submittals will be reviewed for quality control. A minimum of 5% of the submitted inspections will be randomly reviewed. A quality control check will be performed for each CCTV operator and each operator must exceed 90% accuracy.

3.06 MEASUREMENT AND PAYMENT

3.06.1 MEASUREMENT

Smoke Testing shall be measured as the horizontal distance from the center of the upstream manhole to the center of the downstream manhole for each sewer main segment tested. Measurements shall be made to the nearest foot.

3.06.2 PAYMENT

Smoke Testing shall be paid for as the unit price bid item for “SMOKE TESTING” including all products, materials, equipment tools, labor, and incidentals thereto, complete and accepted by the Town.

****END OF SECTION****

EXHIBIT B

EXHIBIT B - SPECIFICATIONS - CLEANING AND TELEVISIONING OF SANITARY SEWERS

1.0 Scope of Work -

The work required by the project shall consist of the following: the performance of all work necessary to both gain access to, clean, inspect and record images of designated sewer lines, manholes, etc.; the disposal of all debris removed from cleaned sewer lines and manholes; and the locating, and, if necessary, raising of manholes; all in accordance with these Specifications and contract documents. The work shall include, but not necessarily be limited to, performing the following tasks in accordance with these Specifications: sewer flow control; sewer pipeline cleaning, including the removal of intruding roots, the removal of intruding service connections, the removal of hardened debris and the removal of hardened grease; sewer manhole cleaning; closed circuit television (CCTV) inspection of designated sewer lines; and the videotape recording of images and audio from the CCTV inspection process. The sewer lines to be cleaned and inspected are all sewer mains and laterals within the project area (entire sanitary sewer collection system tributary to the Congdon Street Pump Station).

2.0 Sewer Flow Control -

When sewer line depth of flow at the upstream manhole of the sewer line being worked is above the maximum allowable for television inspection, as given below, inspection of the sewer line shall not proceed. Considering the diurnal flow pattern witnessed within the sewer line in question, if the depth of flow decreases such that televising is permissible, inspection may proceed during low-flow conditions. Otherwise, the flow shall be reduced to those levels shown below by one of the following methods: the operation of pump station controls by wastewater division personnel; plugging the flow; or by bypassing of the flow around the sewer line to be worked via pumping methods. The hydraulics of the sewer system upstream of the sewer line to be worked shall be considered when choosing a sewer flow control method.

When performing television inspection, depth of flow shall not exceed that shown below for the respective pipe sizes, as measured in the downstream manhole:

Maximum Depth of Flow for Pipe Diameter	Television Inspection
6" - 12" Pipe	20 % of pipe diameter
14" - 18" Pipe	15 % of pipe diameter
21" - 36" Pipe	10% of pipe diameter
Greater than 36" Pipe	20 % of pipe diameter

For pipes that have a non-circular cross section, the smaller of the nominal dimensions of the pipe shall govern.

When flow in a sewer line is plugged or bypassed, sufficient precautions must be taken to protect against surcharging that may result in discharges of flows from the sewer system, including flooding or damage to public or private property. Any such damage that occurs as a result of Consultant activities, including flow control operations, is to be solely the responsibility of the Consultant.

After the work has been completed, the flow in plugged sewer lines shall be slowly released to avoid damage to the sewer system or private property. Liability for any damages to property, public or private, resulting from the activities of the Consultant, shall be the responsibility of the Consultant exclusively.

- 2.1 Sewer Flow Control via Plugging When plugging a sewer line, a temporary sewer line plug shall be inserted into the line upstream of the section to be worked. The plug assembly shall be

designed such that all, or any, portion of the sewage, within the plugged sewer line, can be released at varying rates.

- 2.2 Bypassing Flow via Pumping When bypassing flow around a sewer line, via the use of pumping equipment, is necessary, the Consultant shall supply the labor, supervision, tools and equipment, including pumps and hoses, necessary to divert the flow of sewage around the sewer line in which work is to be performed. The bypass system shall be of sufficient capacity to bypass wet weather flows that, in this case, shall be defined as the design capacity of the pipe. The Consultant will be responsible for assembly, operation, and dismantling of the bypass pumping system, as well as any measures needed to protect the equipment and the public. Bypass pumping shall be permitted only when flow reduction cannot be accomplished by televising during low flow conditions or when plugging of the sewer flow is impractical or likely to cause sewer backups and surcharging. If pumping is required on a twenty-four (24) hour basis, engines shall be equipped in a manner to keep noise to a minimum.

3.0 Sewer Pipeline / Manhole Cleaning

- 3.1 Objectives The intent of sewer pipeline/manhole cleaning is to (1) remove foreign materials from sewer lines to restore the capacity of the lines to a minimum of 99 % of design hydraulic capacity, (2) remove foreign materials from sewer lines to allow for complete inspection using CCTV methods, and (3) remove 99% of the foreign materials from manholes. Since the success of the project, and subsequent sewer pipeline and sewer manhole rehabilitation work, is significantly dependent upon the quality of the CCTV inspection, the importance of the preparation of sewer lines and sewer manholes before inspection cannot be over-emphasized. Materials and obstructions to inspection to be removed from pipes and manholes shall include, but not be limited to, sludge, mud, sand, gravel, rocks, bricks, grease, pieces of broken pipe, roots, hardened debris, protruding taps, foreign materials, etc. The inspection of the sewer lines and sewer manholes shall not proceed until the cleaning and preparation has been completed to the satisfaction of the standards detailed above. The Consultant shall not be required to clean structures other than manholes, such as flush tanks, lampholes, etc.

3.2 Sewer Line Cleaning

The designated sewer lines shall be cleaned to the standards set forth in these Specifications using the methods and equipment specified. If cleaning of an entire sewer line cannot be successfully completed from one manhole, the equipment shall be set up on the other manhole, if available, and the process again attempted. If, again, successful cleaning cannot be performed, or the equipment fails to traverse the entire sewer line, or there is no access to allow for a reverse setup, it will be assumed that a major blockage exists and the cleaning effort shall be abandoned. Cleaning of a sewer line shall be performed to the satisfaction of the Engineer Representative. Cleaning activities that discharges water into a building or residence shall be cleaned up to the property Owners and wastewater division's satisfaction. All costs shall be the Consultant's exclusively.

3.2.1 Equipment

Sewer line/manhole cleaning shall be performed with hydraulically propelled, high velocity jet or mechanically powered equipment. Selection of equipment shall be based on field conditions such as productivity, available access to the sewer line, type and quantity of debris to be removed, size, shape and condition of the sewer to be cleaned, the potential for damage to property, the ability to

excavate the sewer in instances of damage resulting from the cleaning process, etc. The allowable methods of cleaning are discussed in the following paragraphs.

3.2.1.1 Hydraulic Jetting

All hydrocleaning equipment shall be truck mounted, and the truck shall carry its own water tank, fill system, auxiliary engines, pumps, water piping, hydraulically driven hose reel and pressure rated hose. The hose shall be capable of cleaning sanitary sewers and of sufficient length to perform the necessary sewer line cleaning on those designated sewer lines from a single point of access unless a designated sewer line is greater than 600 feet in length. The hose reel shall be hydraulically driven in both directions and the drive shall have sufficient power to retract the hose and attachments when the cleaning nozzle is in operation. All high velocity jet sewer cleaning equipment shall have a selection of four (4) or more high velocity nozzles and shall be capable of producing a range of scouring velocities ranging from a fine mist to a solid stream. The range of water pressures shall be both sufficient enough to completely clean designated sewer lines to the level specified above, yet gentle enough not to displace pieces of deteriorated sewer lines. All functions of high velocity jet hydraulic attachment must be remotely controlled. The nozzles shall be capable of producing a scouring action from fifteen (15) to forty-five (45) degrees from the horizontal. The Consultant shall also have available a high pressure hand gun system to allow for washing and scouring all components of a manhole including corbels, walls, troughs and inverts. The gun shall also be capable of producing a range of water pressures both sufficient enough to completely clean designated manholes to the level specified and to the satisfaction of the Engineer or his Representative, yet gentle enough not to displace existing brick and mortar in more deteriorated manholes.

- 3.2. 1. 2 Chain Root Cutters Removal of foreign materials from sewer lines may be accomplished by physically impacting the materials with hydraulically driven chain root cutters. Materials that may be removed include, but are not necessarily limited to, roots, protruding clay taps, mineral deposits, grease deposits, etc. The equipment shall be capable of rotating the chains at a sufficient number of revolutions per minute such that the removal of protruding taps is performed without either breaking the protruding service connection, creating a jagged-edge on the remaining tap or removing the tap beyond the exterior of the mainline pipe. Reference Section 3.2.5 of these Specifications. When using such an impact device, great care shall be taken by the Consultant to avoid damage to either public, or private, sewer pipe. To minimize the risk, and severity, of such damage the Consultant shall only use chain root cutters in conjunction with televising equipment so that the rotating chains can be viewed during use. Communication between the operator of the televising equipment, who must be viewing the action of the rotating cutters in real time and the operator of the hydraulically driven rotating cutters, must not be interrupted during the use of the rotating cutters. If viewing the cutters during use is not possible due to limited access to the sewer line in question, then the decision to use the chain root cutters shall be the Consultants exclusively, and any damage caused shall be repaired as directed by the Engineer solely at the Consultant's expense. If the Consultant chooses not to use the chain cutters to remove debris within a sewer line that has only one point of access, and no other method of debris removal is effective at removing such debris, then the Consultant shall be paid for that portion of the sewer line that is cleaned and/or televised in accordance with the Specifications.

- 3.2.1. 3 Bucket Machine Bucket machines shall be in pairs with sufficient power to perform the work in an efficient manner. Machines shall be belt operated or have an overload device. Machines with direct drive that could cause damage to the pipe will not be allowed.

3.2.1.4 Rodding Machine: A power rodding machine shall be either a sectional or continuous rod type capable of holding a minimum of 750 feet of rod. The rod shall be specifically heat-treated steel. To insure safe operation, the machine shall be fully enclosed and have an automatic safety clutch or relief valve. Rodding equipment shall be avoided, if possible, in locations where excavations will be difficult due to surface conditions.

3.2.1.5 Air Blast Cleaning of Manholes : The Consultant shall be allowed to clean components of manholes, including walls, corbels, inverts, troughs, etc., with equipment utilizing compressed air and a hand gun system. The operational requirements for such a system shall be the same as those specified for hand-gun systems utilizing high water pressures in subsection 3.2.1.1 of this Section

3.2.2 Material Removal

All materials resulting from sewer cleaning operations shall be removed at the downstream manhole of the sewer line being cleaned. If circumstances within a sewer line limit access to the entire line from the downstream access point and result in material accumulations in the upstream manhole of a sewer pipeline, then the material shall likewise be removed from the manhole during, or immediately after, cleaning. Neither passing material from one sewer line to another nor accumulations of materials in wet wells shall be permitted. Material from cleaning operations shall not be stored in manholes. Both upstream and downstream manholes are to be cleaned as a respective sewer line is cleaned. No payment for work performed shall be made until the manholes at both ends of the sewer line are satisfactorily cleaned. All solids or semi-solids resulting from the cleaning operations shall be removed from the site by the Consultant no less often than at the end of each workday. Under NO circumstances will the Consultant be allowed to accumulate materials on a work site beyond the stated time, except in totally enclosed containers approved by the Engineer. Equipment that utilizes a vacuum may be used to remove all sludge, dirt, sand, rocks, grease, and other materials resulting from sewer cleaning operations. Those materials not removed using a vacuum shall be completely removed using alternative methods. All material generated in sewer cleaning shall be disposed of at a location chosen by the Engineer or his Representative. Often, this site is on the premises of the NWD wastewater treatment facility. The Consultant shall be responsible for delivering the materials to the disposal location.

3.2.3 Water Supply

The Consultant shall make arrangements for obtaining all necessary water with the local water company, United Water (UW). Town of Narragansett shall pay for costs associated with the use of water used in the performance of the work specified, including the cost of water and the cost of inspections by personnel of UW.

3.2.4 Root Removal

Roots shall be removed where root intrusion has either diminished the design hydraulic capacity, or prevented or diminished the quality of CCTV inspection of a sewer line. Root removal shall be sufficiently completed to satisfy the following objectives: to restore the hydraulic capacity of the sewer line to at least 99% capacity after cleaning; to allow for the complete televising of the sewer line in question to the satisfaction of the requirements of Section 4.0 of these Specifications; and to decrease the probability of the damming of debris at the location of the root removal. Only physical removal of the roots from the sewer main will be allowed, no chemical removal methods may be used. Root removal equipment may include the following: rodding machines; hydraulically driven root cutting blade assemblies; hydraulic jetting equipment and hydraulically propelled chain root cutters. Reference Section 3.2.1 for more information on such

equipment. Care shall be taken to select equipment that will not damage the host pipe or sewer service connections. All lines that require root cutting will be both cleaned and inspected after root cutting is completed. The cost of this additional work will be considered incidental to the unit cost of root cutting. After root removal, re-televising the entire sewer line is not necessary, but the pipe in the locations where the roots have been removed, and any part of the line not yet videotaped, must be re-televised after root removal so that any piping, connections, defects, etc., hidden before root removal might be revealed. Televising may be stopped and the root cutting executed while the videotaping is paused.

3.2.5 Protruding Service Connections

Removal of protruding service connections shall be performed by the Consultant when such connections either do not permit the passing of the televising camera or, in the opinion of the Engineer or his Representative, might be problematic in the performance of a future sewer repair. The intruding connections shall be removed by means of either a robotically controlled cutting device or a hydraulic root chain cutter. Again, regarding the hydraulic root chain cutter, equipment shall be capable of rotating the chains at a sufficient number of revolutions per minute such that the removal of protruding taps is performed without either breaking the protruding service connection, creating a jagged-edge on the remaining tap or removing the tap beyond the exterior of the mainline pipe. The intrusions shall be ground or filed to within one-half inch of the main sewer line or to a distance found to be acceptable by a Representative of the Engineer. Under no conditions will it be acceptable to remove taps by impacting them with a piece of equipment other than a cutting device as discussed above, which may cause damage to either the connection or to the mainline sewer. Any line in which a tap is removed shall be cleaned and then televised after the tap is removed. As with root removal, re-televising the entire sewer line is not necessary, but the pipe in the vicinity of the tap, and any part of the line not yet videotaped, must be videotaped after tap removal.

3.2.6 Special Circumstances

It is recognized that situations will occur where further sewer line cleaning, or a particular method of cleaning, is undesirable. Examples of such a situation might be the discovery of a sewer line that is in advanced stages of deterioration and further deterioration is likely if sewer line preparation proceeds. Another situation might be when poor hydraulics within a section of the sewer system limits the methods able to be used to clean the system out of concern of creating sewer backups. Should the Engineer, the Engineer's Representative or the Consultant identify such a circumstance, the Consultant shall proceed according to the Engineers' directions. If the Consultant, or the Engineer's Representative, informs the Engineer of a discovered potential defect in a sewer line that may prevent further sewer line preparation, the Consultant shall safely inspect as much of the sewer line in question as possible then submit all video recorded inspections to the Engineer. Upon review the Engineer will either instruct the Consultant to cease sewer line preparation and inspection or to continue cleaning and inspection of the sewer line in question using methods detailed in this section. If the Consultant refuses to continue, no payments shall be made for either preparation or inspection of the sewer line, or adjoining manholes. Please see section 3.2.9, titled Compensation, for further details. If the Engineer instructs the Consultant not to continue cleaning and inspecting the sewer line in question, the Consultant shall be paid for any portion of the sewer line that has been inspected and/or televised.

3.2.7 Protection of Sewers and Manholes

The Consultant shall take care not to cause further damage to either existing sewer lines, or sewer manholes, during the cleaning process. Regardless of the cleaning method chosen by the Consultant, whether jetting, washing with a high pressure hand gun, rodding or using bucket machines, any damage to existing sewer lines or manholes caused by the Consultant shall be repaired solely at the Consultant's expense and to the satisfaction of the Engineer or his Representative. All judgments regarding both damages caused by the Consultant and repairs to be performed shall be the dominion of the Engineer exclusively.

3.2.8 Protection of Public and Private Property

During sewer cleaning operations, satisfactory precautions shall be taken to prevent damage to public or private property. When using hydrocleaning equipment, care shall be taken when accessing a sewer line from an upstream manhole where it is known that wye connections are present. In such situations, the scouring velocity of the cleaning water shall be reduced to avoid causing damage to property upstream of the wye connection. Additionally, when using hydrocleaning equipment from a downstream manhole, care shall be taken to avoid blockages in wye connections that might occur during the propelling of the cleaning head and hose upstream. Care shall be taken to avoid pushing debris and plugging connections near upstream lampholes, flush tanks or dead ends when cleaning sewer lines with only a downstream point of access. Any blockages within wyes, tees, risers, taps, etc., that result from the work of the Consultant shall be the responsibility of the Consultant exclusively.

3.2.9 Compensation

Sewer line and manhole cleaning shall not be measured. This work shall be paid for as the applicable unit price bid item for either "Closed Circuit Television Inspection: Sewer Mains" or "Closed Circuit Television Inspection: Sewer Laterals", including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Town.

Multiple attempts at sewer line preparation, including, but not limited to, sewer line cleaning, protruding tap removal and root intrusion removal, shall not be paid per attempt. For example, if a fifty (50) foot portion of sewer is found to require root removal, if the Consultant requires four passes with a root cutter to remove the roots to the satisfaction of the Engineer, then the payment made to the Consultant shall not be for 200 lineal feet of root removal, but rather for the measured fifty (50) feet of root removal. No payment shall be made for work performed in a particular sewer line until the manholes at both ends of the sewer line in question are cleaned to the satisfaction of the Engineer. Plugging and bypassing of sewer flow shall be included in the work and shall not be considered for payment. In the sole judgment of the Engineer, if the sewer line is not satisfactorily prepared for inspection in accordance with these Specifications, no payment for inspection of any portion of the sewer line in question shall be made to the Consultant. If, in the judgment of the Engineer, preparation of a sewer line is unable to be completed due to circumstances beyond the control of the Consultant, the Consultant shall be compensated for work performed in that portion of the sewer line able to be prepared. If the Consultant declares all or any portion of a sewer line, to be inaccessible for preparation, for any reason, the Engineer shall have the exclusive right to provide for alternative arrangements for obtaining sewer line preparation services for the portion of sewer line in question. If sewer line preparation of any portion of the declared inaccessible portion is obtained by services not provided by the Consultant, no payment shall be made to the Consultant for either preparation or inspection of the entire sewer line in question, including adjoining manholes. Additionally, the

Engineer may, at his sole discretion, make the Consultant responsible for the costs of those services performed by a third party for the completion of work required in the contract.

4.0 Television Inspection, Videotaping and Recording -

4.1 OPERATORS - Video inspection shall be performed by a certified NASSCO PACP trained operator. Inspections shall be conducted per NASSCO PACP procedures.

4.2 EQUIPMENT

4.2.1 The Contractor's CCTV equipment shall include video cameras, a video monitor cable, power sources, and all equipment necessary to perform a CCTV inspection as outlined in this Technical Specifications.

4.2.2 The cameras shall meet OSHA requirements for operating in the sanitary sewer environment.

4.2.3 The cameras shall have Pan-and-Tilt capabilities, and shall have a minimum of 360 x 270 degree rotation and illumination sensitivity shall be three lux or less and provide a minimum of 460 lines of resolution. The focal distance shall be adjustable through a range from 25 mm (1 inch) to infinity.

4.2.4 During CCTV inspection, lighting intensity shall be adjusted to minimize glare. Lighting and picture quality shall be adjusted to provide a clear, in-focus picture of the entire periphery of the pipeline for all conditions encountered.

4.2.5 All camera systems shall be able to navigate around minor objects, roots, and debris. The system used to move the camera through the pipe shall not obstruct the camera's view or interfere with proper documentation of the sewer conditions.

4.2.6 The camera cable shall be retracted to remove slack and to ensure an accurate footage reading.

4.2.7 The distance shall be measured between the exit of the start manhole and the entrance of the finish manhole for a true measurement of the length of the pipe segment, as required by PACP. It shall be recorded in standard units and the video display readout shall display units to one-tenth of a foot.

4.2.8 The cable footage-counter shall be accurate to plus or minus 2 feet per 1,000 feet.

4.2.9 Video inspection and reporting shall be submitted in a NASSCO compatible format.

4.2.10 The camera lens shall be kept clear of condensation and debris during the CCTV inspection.

4.3 OBSERVATIONS

4.3.1 All observations and defects shall be documented in a database and shall include digital video recording and digital photographs as defined in Sections 2.24 and 2.25.

- 4.3.2 Each video clip and photograph provided shall correspond to inspection data in the database, and each set of inspection data listed in the database shall be properly linked to the appropriate video clip and photos.
- 4.3.3 All observations shall be selected from a standard table of descriptions incorporated in the inspection reporting software, as required by PACP. Any additional comments regarding the observation shall be indicated in the remarks box.
- 4.3.4 The severity of each defect or observation shall be recorded and rated according to the PACP method.
- 4.3.5 All observations shall be recorded using PACP codes as outlined in NASSCO's PACP Reference Manual, and in this document

4.4 VIDEO

- 4.4.1 The Contractor shall make a continuous color digital recording in MPEG 4 format for each pipe segment inspected, unless specified by TOWN.
- 4.4.2 Video files shall have a minimum resolution of 352 x 240 pixels and an interlaced frame rate at a minimum of 24 frames per second.
- 4.4.3 Audio reporting will be avoided to prevent inconsistent operator subjectivity.
- 4.4.4 Video inspection will not exceed a traverse rate of 30 feet per minute.
- 4.4.5 The Contractor shall pause the digital recording at any time there is a delay in the inspection and restart the digital video recording in the same digital file. The pause shall in no way affect, freeze, or interrupt the replay of the video and shall not close the video file during the inspection.
- 4.4.6 Each pipe segment (manhole to manhole) shall be identified with an initial text screen and completed in accordance with PACP's CCTV inspection form header Instructions and shall be as follows:
 - Line Number & Description
 - Line 1: Surveyed By
 - Line 2: City
 - Line 3: Street
 - Line 4: Location Code*
 - Line 5: Weather*
 - Line 6: Direction of Survey
 - Line 7: Use of sewer*
 - Line 8: Pipe Material
 - Line 9: Pipe Diameter/Height
 - Line 10: Pipe Length (on plans)
 - Line 11: Start Manhole Number
 - Line 12: End Manhole Number
 - Line 13: Pipe ID (PSR or MMS #)
 - Line 14: Inspection Time/Date

Line items noted with an asterisk (*) are optional depending on the line capacity of the text overlay equipment.

4.4.7 This data must completely match the data entered in the database header information.

4.4.8 The initial text screen shall appear no more than 15 seconds at the beginning of the video footage, and shall appear before the 360 degree pan of the starting manhole.

4.4.9 During the CCTV inspection, the video shall show the following text at all times:

<u>Line Number</u>	<u>Description</u>
--------------------	--------------------

Line 1:	City
---------	------

Line 2:	Street/ Start Manhole Number/ Direction of Inspection/ End Manhole Number
---------	---

Line 3:	Pipe Material / Pipe Size
---------	---------------------------

Line 4:	Inspection Time/Date/Running Total
---------	------------------------------------

4.4.10 During the CCTV inspection, the camera shall stop at all defects and significant observations to ensure a clear and focused view of the pipe condition and shall rotate the camera head at the defect to allow for adequate evaluation at a later time.

4.4.11 All defects and significant observations shall include a text overlay of the recorded observation.

4.4.12 The video recording shall include on-screen observation text for every observation recorded in the database, including AMH, in addition to the text in Section 2.24.9.

4.4.13 The naming of the video file shall consist of the “FROM MANHOLE STATION NUMBER”, “TO MANHOLE STATION NUMBER”, and the eight digit inspection date, as shown in the following example, or as pre-approved by TOWN:

0+00_3+45_20050101.mp4
(FromMHStation_ToMHStation_YYYYMMDD)

Note: “Manhole Station Number” may consist of survey station numbers as indicated on the design plans.

4.5 PHOTOGRAPHS

4.5.1 Digital photographs in JPEG format shall be made of all recorded defect observations. These photographs will be computer generated with the use of the inspection reporting system software.

4.5.2 JPEG images shall be captured at a minimum resolution of 640x480 pixels.

4.5.3 At a minimum, all photographs shall be named consisting of the following descriptions: “FROM MANHOLE STATION NUMBER”, “TO MANHOLE STATION NUMBER”, eight

digit inspection date, and the defect 'station' location along the pipe. It is in the Contractor's discretion as to additional data information that may be needed in the naming of the files to make each file unique within the file naming constraints of their inspection software.

0+00_3+45_20050101_125_A.jpg
(FromMHStation_ToMHStation_YYYYMMDD_Defect Position_UniqueData)

4.5.4 Any additional information shall be included after the mandatory info specified above. The naming convention shall be consistent throughout the project.

4.5.5 A minimum of TWO photographs of each defect shall be taken, one with a perspective view and one with a close-up view.

4.5.6 ONE photograph is required for each lateral connection looking directly at the connection and each AMH observation from the bottom of the manhole looking up.

4.6 ADDITIONAL INSPECTION PROCEDURES

4.6.1 Bulkheads shall be removed along the entire segment of the sewer line from manhole to manhole. Otherwise, the segment is considered incomplete.

4.6.2 A full 360 degree pan of all manholes is required. This video footage shall occur at the beginning of each pipe segment survey inspection from the bottom of the manhole panning up the manhole shaft. The Contractor shall cover the manhole opening to prevent too much light from entering the structure and to ensure a clear and focused view of the manhole interior. In instances when the manhole is the terminating manhole, then the pan shall occur at the end of the pipe segment survey inspection.

4.6.3 Video footage shall be taken centered on the pipe with the water level running horizontally. The camera shall run along the invert of the pipe and not at its side, unless it is passing a point obstacle. If extended driving on the side of the pipe is required, then either the pipe needs a more thorough cleaning or an observation should be noted from the PACP codes describing the nature of the obstacle

4.6.4 Obstructions may be encountered during the course of the CCTV inspection that prevents the travel of the camera. In instances when obstructions are not passable, the Contractor shall withdraw the equipment and begin a CCTV inspection from the opposite end of the sewer reach.

4.6.5 If a particular line is inspected more than once, then the Contractor shall include all versions of the inspections in the database. The MGO observation shall be used on all inspections except at the first occurrence. The Contractor shall provide an explanation for the additional inspections in the Remarks section.

4. SUBMITTALS AND DELIVERABLES AND REVIEW

4.1 SUBMITTAL: The Submittal will consist of:

4.1.1 A hard drive or DVD(s) containing the database, video, and photo files.

4.1.2 A printed Report in a hardcover white clear view 3-ring binder labeled as described in Section 4.4, containing the following information:

4.1.2.1 Footage calibration report for each camera used.

4.1.2.2 PACP Certificate copies of all operators.

4.1.2.3 Summary table of all pipeline segments inspected with the following fields in the order listed:

Column 1: Date of Inspection

Column 2: Start Manhole

Column 3: Stop Manhole

Column 4: Total Pipe Length (per as-built plan)

Column 5: Televised Length

Column 6: Quick Maintenance Rating (per PACP)

Column 7: Quick Structure Rating (per PACP)

Column 8: Section Number

(*NOTE: The table shall be sorted by StartManhole)

4.1.2.4 An observation table of all pipeline segments inspected with the following fields in the order listed:

Column 1: Section Number

Column 2: Position of Defect

Column 3: Observation Code (per PACP)

Column 4: Observation Description (per PACP)

Column 5: Structural Grade (per PACP)

Column 6: O&M Grade (per PACP)

(*NOTE: The table shall be sorted by Section Number)

4.2 DELIVERABLES:

4.2.1 As part of the Submittal, the Contractor shall submit all video recordings, image files, and databases on a maximum of 20 DVDs or a rectangular shaped external hard drive with USB 2.0 connection, or similar, as preapproved by TOWN. If a hard drive is submitted, the submittal shall include the power cord and USB connection cable. The external hard drive and cables will become property of TOWN unless otherwise indicated.

4.2.2 DVD's or External hard drive(s), binder cover and binder spine label shall include the following information on computer-generated labels:

4.2.2.1 Town of Narragansett – Wastewater Division

4.2.2.2 General Contractor Name and Sub-contractor Name

4.2.2.3 Project Name (e.g. PC 123456 Tract 15423-02)

4.2.2.4 Start Date of CCTV Inspections (e.g. MM/DD/YYYY)

4.2.2.5 Finish Date of CCTV Inspections (e.g. MM/DD/YYYY)

- 4.2.3 All files included as part of the deliverables shall be contained within one single folder on the DVD or hard drive and labeled with the project name, and the date as:

PC45123_52369-02_AcceptanceReview_20071220_1
(PrivateContractNumber_TractNumber_AcceptanceReview_ YYYYMMDD _Submittal#)

4.3 REVIEW

- 4.3.1 The video recordings, photographs, and data shall be reviewed by TOWN for focus, lighting, clarity of view, and technical quality.
- 4.3.2 Videos or photographs recorded while a camera has flipped over in the process of traveling or the viewing of laterals, obstructions, or defects are blocked by cables, skids or other equipment will not be accepted.
- 4.3.3 Shape, focus, proper lighting, and clear, distortion-free viewing during the camera operations shall be maintained. Failure to maintain these conditions will result in the rejection of the video and/or photographs by the TOWN.
- 4.3.4 Videos or photographs recorded showing steam, inadequate lighting, or other poor image quality will be cause for rejection by TOWN.
- 4.3.5 Any reach of sewer where recording quality, inspection, and/or report is not acceptable according to this Technical Specifications to TOWN shall be re-televised, or data modified.

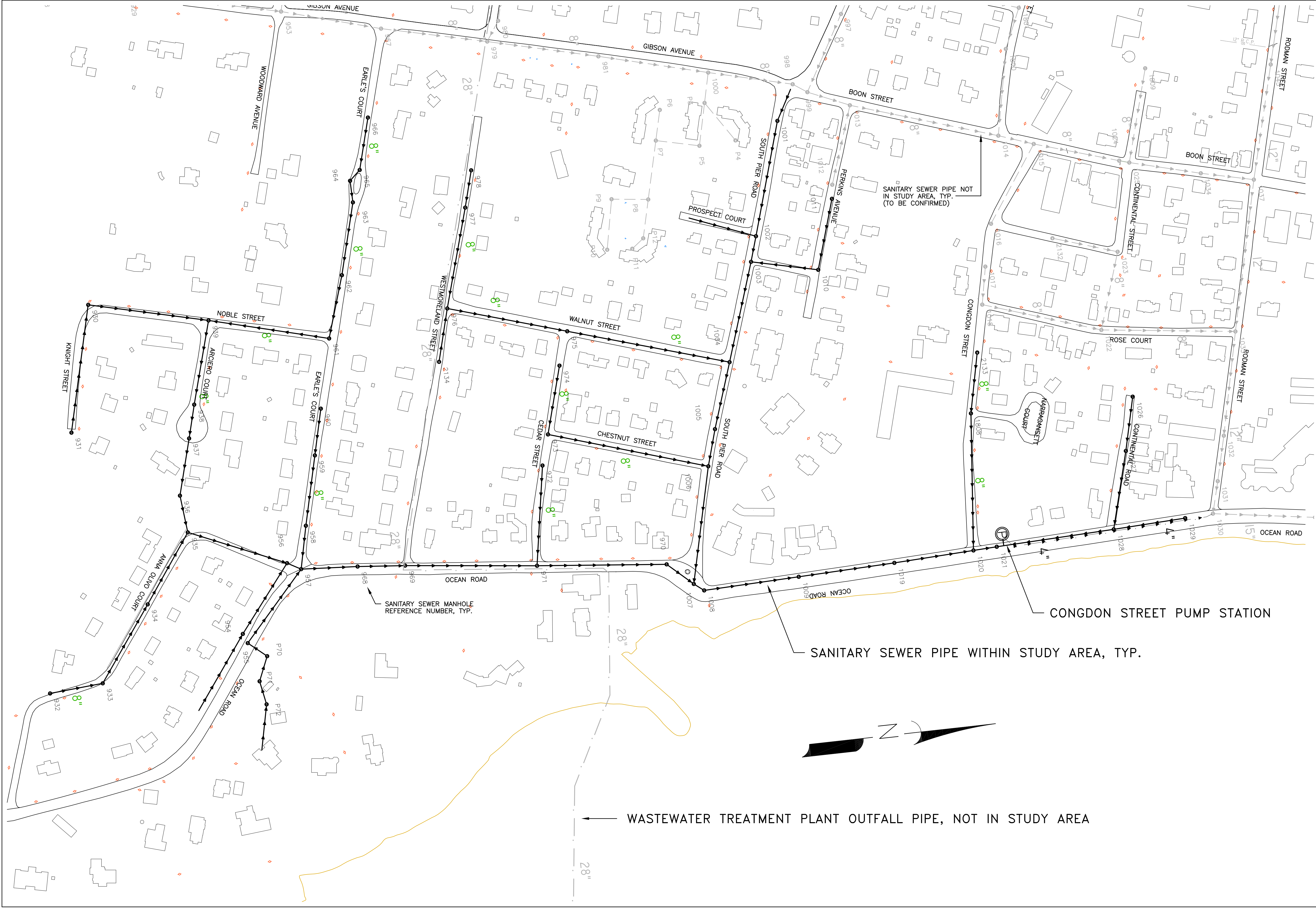
5.0 COMPENSATION

Sewer line (including televising manholes as described) and lateral line inspection shall be paid for as the applicable unit price bid item for either “Closed Circuit Television Inspection: Sewer Mains” or “Closed Circuit Television Inspection: Sewer Laterals” , including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Town.

Measurements of the actual number of linear feet cleaned shall be made from the center of the manholes and, if necessary, taken from the footage on the recorded video, if found to be accurate. Multiple attempts at sewer line inspection shall not be paid per attempt. For example, if the upstream fifty (50) feet of a sewer line is inspected and it is found that more sewer line preparation is required downstream of the downstream inspection point, the Consultant shall not be paid for additional inspection if it is necessary that the camera and transport again traverse the portion of sewer line already inspected. No payment shall be made for sewer cleaning, television inspection, or root cutting until the manholes at both ends of the sewer line in question are cleaned to the satisfaction of the Engineer. The cost of the videotapes shall be incidental to the cost of sewer television inspection. Additionally, the costs of items necessary for the performance sewer line inspection, such as the videotape transfer of possession documentation and the documentation of recordings on videotapes, shall also be incidental to the cost of sewer line inspection. In the sole judgment of the Engineer, if the sewer line is not satisfactorily inspected in accordance with these Specifications, no payment for inspection of any portion of the sewer line in question shall be made to the Consultant. If, in the judgment of the Engineer, inspection of a sewer line is unable to be completed due to circumstances beyond the control of the Consultant, the Consultant shall be compensated for work performed in that portion of the sewer line able to be inspected. If the Consultant declares all, or any, portion of a sewer

line, to be inaccessible for inspection, for any reason, the Engineer shall have the exclusive right to provide for alternative arrangements for obtaining sewer line inspection services for the portion of sewer line in question. If sewer line inspection of any portion of the declared inaccessible portion is obtained by services not provided by the Consultant, no payment shall be made to the Consultant for work performed within the entire sewer line in question, including adjoining manholes. Additionally, the Engineer may, at his sole discretion, make the Consultant responsible for the costs of those services performed by a third party for the completion of work required in the contract. If a sewer line is televised before one of the bookend manholes are located and raised, and the distance from the counter used during televising is used to locate the manhole not used for access, the preparation and inspection of the sewer line will still be paid per lineal foot as a two-point access line.

EXHIBIT C



DRAWING TITLE:
PLAN FOR SEWER SYSTEM EVALUATION SURVEY
WASTEWATER COLLECTION SYSTEM TRIBUTARY TO
CONGDON STREET PUMP STATION (STUDY AREA)

SCALE:
1" = 120'

DATE:
december., 2011

TOWN OF NARRAGANSETT
ENGINEERING DEPARTMENT